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# Continuous personal improvement

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*M.L. Emiliani*

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## The author

M.L. Emiliani is a Purchasing Manager in World-Wide Procurement at Pratt & Whitney, a Division of United Technologies Corporation, Middletown, CT, USA.

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## Abstract

Many manufacturers are now critically evaluating every activity and process for its effectiveness in bringing maximum value to the customer. Intuitive factory management techniques of yesterday are being replaced by much simpler, often counter-intuitive, methods that greatly minimize delays, reduce costs, and improve quality. This body of knowledge and practice is broadly known as "world-class manufacturing" or "lean manufacturing", and encompasses well-defined continuous improvement tools such as *kaizen*, cellular manufacturing, pull systems, total productive maintenance, and visual factory. However, success with lean manufacturing can be limited unless it is recognized that the behaviour of employees must change concurrently with changes in business processes. The author describes the applicability of well-defined continuous improvement tools to the continuous improvement of one's self. The model serves as a foundation for those familiar with world-class manufacturing methods to focus on self-improvement efforts. Further, this model is useful as a mnemonic device to simplify the difficult task of personal development, as well as ensure consistency between business processes and group or individual behaviour.

## Introduction

In recent years, employees have become familiar with an array of concepts and strategies designed to improve the effectiveness of business processes (Bikhchandani *et al.*, 1992; Hammer and Champy, 1993; Moeller, 1996). Re-engineering both office and manufacturing shop floor processes has greatly improved the productivity and cost-competitiveness of a wide variety of products and services (Lee, 1996; Schonberger, 1986; Womach *et al.*, 1990; Womack and Jones, 1996). However, the factors that enable re-engineering concepts to achieve the gains necessary for global competitiveness can remain elusive. There are many examples of re-engineering efforts that have not been successful (Kotter, 1995; Pfeffer, 1996), often due to management's ignorance of individual and collective behaviour, as well as the complex psychological interactions between leaders and followers in times of change (Kets de Vries, 1989, 1993, 19894).

Successful businesses typically possess effective systems and procedures that serve all participants well, from order entry to after-market service. But that is not all that is required. Managers and leaders must be capable of performing the business and personal fundamentals well. The personal fundamentals involve both intra- and inter-personal skills, and their importance reflects the fact that one of a manager's principal products is successful interaction with people. These skills include leadership, consensus building, coaching, motivation, and rewards, to name a few. However, realization of these competencies requires the ability to reflect, achieve self-awareness, emotional stability, and consistency in words and actions. A few people may be born with all that it takes to lead effectively; but for most, it is the result of hard work and dedication, focused on modifying ineffective life-long habits, biases, and assumptions (Bennis, 1989; Cleary, 1989; Covey, 1989; Csikszentmihalyi, 1993).

It is apparent that as aggressive competition continues to create a greater variety of challenges there will be a tendency to value tougher managers that force business performance. However, this is the easiest possible solution that anyone can implement. More people must be willing to accept the far greater and more worthwhile challenge of becoming disciplined. The bar for acceptable

behaviour and personal performance must be raised concurrently with the business goals. The future business environment will demand that everyone in an organization, especially managers, have more effective inter- and intra-personal skills including intellectual and emotional capability for leadership, persuasion, co-operation, empathy, consistency, sharing a vision, meeting commitments, and humility.

Managers must recognize that their relationships, parent's training, religious education, and formal education do not usually imbue them with these skills. These experiences may, in fact, work together in negative associative ways to become significant obstructions to personal development in later years. In addition, the motivation for personal development may be thwarted by directly observing the failure of key role models, fixation of mental models based on stereotypes, or the existence of dysfunctional work environments that offer few rewards for practising generative behaviours. Self-awareness, reflection, the ability to accept or deflect strong criticism, and perseverance thus become important competencies.

Senior managers typically have access to professional coaches to provide guidance on leadership and personal development. Workers would be fortunate if their supervisor or manager took a strong interest in their performance and coached them to greater effectiveness. But the pressures of day-to-day life often preclude consistent and meaningful coaching. So it is typically up to individuals to train themselves, provided that they see a personal or business need, have a desire to change, and are willing to make a commitment to life-long learning. A significant investment in personal time is required to understand, internalize, and practice the timeless principles that guide generative behaviours. Most people are simply unwilling to invest the time it takes either because the payback is not well-defined or the desired results can not be achieved within the expected time frame of a few weeks. Many people also do not know where to start or how to sustain themselves through frustrating periods. If they are successful at learning the concepts, some are simply unable to consistently practice what they preach. The work environment may also discourage the practising of generative behaviours.

The objective of this paper is to provide simple bridges between business process improvement tools that are now generally common in the workplace and personal development, with the goal of improving personal and organizational effectiveness. The model is presented as metaphors to aid in understanding and comprehension of the concepts. Table I shows the relationships between selected factory continuous improvement tools and personal development strategies. Note that they should not be interpreted as tools capable of analytically measuring human performance. Hence, readers are advised to avoid extension to unrealistic or unintended domains.

### Continuous improvement

The term "continuous improvement" means incremental improvement of products, processes, or services over time, with the goal of reducing waste to improve workplace functionality, customer service, or product performance (Suzaki, 1987). Processes subjected to analysis by this concept characteristically reveal significant opportunities for reductions in process time or expense, and improvements in quality or customer satisfaction. Continuous improvement principles, as practised by the most devoted manufacturers, result in astonishing improvements in performance that competitors find nearly impossible to achieve.

In terms of personal development, "continuous improvement" requires us to question the basic notion that people can not change. This belief, popularized by clichés such as

Table I Business process-personal behaviour relationships

Factory process improvement tools	Personal improvement strategies
Continuous improvement	Life-long learning
One-piece flow	"Do it now" mindset
Standard work	Personal discipline, consistency, alignment
Kanban	Service-oriented mindset, helping others
Five S's	Organized workspace, thoughts and behaviour
Visual controls	Generative body language
Audio signals	Engaging and constructive encounters
Total productive maintenance	Mind-body harmony

“you can’t change people” is obviously false, given the overwhelming evidence to the contrary. Continuous personal improvement asks us to accept the challenge to modify our own behaviour, and recognize that self-development is a never-ending process. It is striving for perfection, but knowing that it can never be fully achieved. Mistakes will be made, but these will be viewed as positive sources for reflection, enhancing our self-awareness, and serve as indispensable elements for future development.

Manufacturing processes are not improved without first gaining a detailed understanding of what is done, who does it, why it is done, how it is done, and how long it takes to do. Similarly, we first have to understand ourselves before we can decide what to improve. This means that we must benchmark our behaviours and seek solutions to intra- and inter-personal conflict through feedback, self-reflection, and dialogue. Feedback may come without asking, but it is better to seek it from people that can provide you with useful objective data. It helps if the feedback-giver is someone who genuinely cares about people, and if the feedback is delivered pointedly but diplomatically. For feedback to be successful, we must be willing to listen, suspend responding (unless asked), and later reflect on what has been said.

Reflection means that we think about what we said and did, that we evaluate the outcome or other possible outcomes that may have been more desirable, in a positive light for a brief period of time. It differs from analysis, which is typically much more laboured or detailed and can take days, weeks, or months to arrive at an understanding. Successful reflection provides clear direction, uncovers useful lessons learned, and makes us feel happy and more content. Reflection can be greatly facilitated by reading books or articles that describe generative behaviours or alternative solutions to conflict (Covey, 1989; Csikszentmihalyi, 1993; Roberts, 1987). Meditation is also a highly effective means of constructively reflecting on circumstances or achieving mental states free of clutter (Cleary, 1995; Goleman, 1989).

Dialogue involves a substantive exploration of the possibilities with one or more person. It is distinct from discussion and debate, which is divisive, highlights differences, and results in winners and losers. This tends to be the dominant mode of conversation today.

Dialogue requires suspension of personal views, such that active listening, thoughtful questioning, and learning takes place. All participants win when engaged in dialogue, because everyone contributes and learns. Problems or conditions are explored and resolved constructively when we identify areas of common ground and make use of the diversity found in people and their thought processes.

Success at continuous personal improvement also requires developing an understanding of and attentiveness to our own biases and assumptions, and that of others. It means having the discipline to catch ourselves just before we say or do the “wrong” thing. It means bringing subconscious thoughts, one by one, to the forefront of our mind and challenging their validity. It will help make the choice between living life as generally happy and content or cynical and unfulfilled. This skill develops gradually, over time, if worked on consistently, and is helpful in eliminating the human disposition towards negative thoughts and actions. It is a skill that requires great diligence, but is well worth the years of daily effort. Every situation and environment offers opportunities to practice continuous personal improvement, no matter how negative it may be.

### One-piece flow

One-piece flow is a technique used to manufacture components in a cellular environment. The cell is an area where everything that is needed to process the part is within easy reach, and no part is allowed to go to the next operation until the previous operation has been completed. The goals of one-piece flow are to make one part at a time, correctly, all the time, and to achieve this without unplanned interruptions or lengthy queue times. Tasks are reduced to their simplest components so that there are fewer opportunities for machine or operator error. Done correctly, there is a continuous flow of activity between the shop operators and manufactured product. Savants of one-piece flow manufacturing continuously search for improvement opportunities to reduce waste by even fractions of a second or hundredths of a per cent. This is a generative manufacturing method created to continuously increase output, improve quality, and grow sales and profits, without the need for constantly

enlarging production or support staff. One-piece flow is an extremely efficient way to manufacture goods, provided the correct physical structure and behavioural models have been set up to support its particular needs.

In terms of continuous personal development, one-piece flow means to perform each activity as it is presented; i.e. to “do it now”. Complete each task as it comes, rather than letting it sit in queue waiting for disposition, which simply increases your personal work-in-process inventory. For example, open mail and respond to it when read, rather than let a week’s worth pile up unanswered. Answer voice mail messages immediately after they are retrieved. Sign whatever is in the signature folder when it is received. Meet with people when they want to meet with you. After all, people would not be interacting with you if they did not need your participation or value your opinion. Respond to people when people need a response, not when you are ready to give it. In an organization, we exist partly to serve each other. Behaving with a service-oriented mindset means that we drop what we are doing and serve others, even if we would rather keep doing our own task, and even if there is no identifiable reward. If it is so important, then we should go somewhere else to get it done undisturbed.

If you are a supervisor or manager, you have a special responsibility. Your job is to serve others, particularly those that “work for you”. Managers work for the people that comprise the organization that they are held accountable for. Do not keep people waiting, as they are probably trying to help “your” organization progress. So you should stop what you are doing and satisfy their needs first. If you recognize that things are piling up, do not ignore it; do something about it. Delegate upwards, downwards, sideways, outside the company, or do it yourself. As the saying goes, “do what you don’t want to do, because that’s probably what needs to be done”.

### Standard work

Standard work is a term used to systematize how a part is processed, and includes man-machine interactions and studies of human motion. Manufacturing engineers break down each operation into small pieces, making certain that each worker is given all the tools to make the part quickly and with the highest

quality. The process is documented in writing, with photographs and video, and examples of defective products nearby. This is done to eliminate errors that waste time and money, and ensure reproducibility from operator-to-operator. Successful standardization of work processes helps assure high quality product, proud workers, satisfied customers, workplace safety, and strong factory cost performance. Reducing variation in the shop floor environment leads to remarkable productivity improvements.

One of the challenges of senior management is to ensure that everyone in the organization understands the challenges of the marketplace, accepts the performance metrics, and believes in the company’s values, mission, and vision. This is especially important if the marketplace is undergoing great change, and the company’s processes must be improved. However, supervisors and managers may not fully support senior management at first because they do not know how or are not willing to adapt their style to the needs of the people and of the business. So each manager will interpret strategies and goals differently, and tell a slightly different story to his or her people depending on the personal biases and assumptions formed over the years. Wide variation in management’s message and leadership styles can have significant negative impact on shop and office productivity. Faults in the corporate culture may become magnified and exploited by those wanting to deny the current business realities and maintain the status quo.

Proactive senior management will communicate extensively to explain the issues, gain buy-in for the going-forward plan, and develop new multi-level training classes to teach the skills necessary to win in the marketplace. When this is done well, the variation in management and leadership practices is reduced to the point where they become standardized. What were previously faults in the corporate culture may become new pillars of strength from which to prosper. The consistency in words and actions can help transform an organization and lead to successful business process improvement activities.

### Kanban

Kanban is a Japanese word that means “instruction card”. It is a signal, such as an

empty container returned to the start of the assembly line, that makes obvious the need for replenishment of materials to a user. Kanbans are used in “pull” manufacturing systems, where product is manufactured to the pull of market-driven demand. Successfully deployed kanbans deliver the right amount of material to the right place exactly when it is needed. The unpredictable and expensive batch-and-queue method of manufacturing, coupled with unreliable forecasting associated with traditional production models, is replaced with reliable, predictable, kanban systems. Thus, great speed can be achieved in manufacturing, and product is not manufactured when a need does not exist. There is little ambiguity.

For managers, a kanban or pull system means providing the workers with what they need when they need it – tools, software, capital equipment, access, feedback, or the opportunity to participate. It means that management is responsive to the needs of the people, and takes immediate and meaningful action. Governors that limit the speed of the corporate engine are removed to ensure the organization’s response is tuned to customer requirements. Processes are well defined, but flexible, so that speed can be achieved in satisfying needs. There is little paralysis caused by uncertainty or having to refer to voluminous rules or procedures. Managers today often tell workers that speed is critical to success. So to be consistent, managers should meet workers’ needs with great speed, as it is critical to credibility and success.

Consistency is a fruitful area for personal development, and requires constant feedback and close monitoring of one’s own behaviour in different circumstances. Developing empathy for others is aided by strong listening, solid reality-checking skills, and willingness to accept constant (often negative) themes from workers. These will lead to more accurate views of the workplace, and issues contained within it, so that a positive impact can be made when addressing workers’ needs for change.

### The Five S’s

The “Five S’s” are a shorthand description of shop floor practices that means “sort, simplify, standardize, self-discipline, and sweep”. Sort, simplify, and standardize relate to knowing what you need, eliminating

unnecessary items from the workplace, and point-of-use storage and utilization of materials. Self-discipline and sweep describe work habits related to orderliness and cleanliness. Shop supervisors and managers typically require operators to maintain shop orderliness and cleanliness. However, their own offices, work habits, and problem solving mental models may be quite disorganized. So to be consistent, office areas must be held to the same standards as shop areas – neat and clean – and work habits should be well organized to improve service. The Five S’s also support the “do it now” mindset that is critical to achieving speed.

### Visual controls and audio signals

Visual controls are information boards displayed where everyone in the factory can see them. This is in contrast to previous workplace rules, which dictated that performance data should be retained as “management secrets”, for the sole consumption of well-educated managers who knew what to do with the numbers. The visual controls, now common in many American manufacturing facilities, describe workplace safety, production throughput, material flow, quality metrics, or other information. Another form of visual control is a flashing light that tells everyone a piece of production equipment has broken unexpectedly and is in need of immediate repair.

Managers can also adopt visual signs and controls. If they leave the office, go off-site or for meetings in another building, they can post a sign saying where they are, when they will be back, and how they can be contacted. Another form of visual signal is body language, whose fundamentals should be well understood since a manager’s primary product is successful interaction with people. Tight facial muscles, frowns, furrowed brows, negative gestures, appearing frustrated, confused, angry, or worried, brings one’s inner world to the surface. It broadcasts a “me first” signal, that my own issues are more important than yours. It says that we are not very interested in making ourselves available to other people, and reduces the opportunity for successful interactions. Habits like tapping feet, crossed arms, doodling, frequent breaking of eye contact, and answering the phone or reading the mail while talking to people signal disinterest. While everyone has times

where they need reduced personal interaction, it is important to remember that disengaging habits can quickly be formed. It takes a great deal of practice to learn how to give each person your undivided attention and thus maximize the positive outcomes (and opportunities for action) possible with each encounter, while at the same time not appearing to be duplicitous. If you are not smiling, your people are not smiling either.

Audio signals in the factory are also very important because they signal malfunctioning equipment, sound warnings before the start of machine operation, or other useful information. In an management context, audio signals can indicate enthusiasm, neutrality, agreement, hurriedness, disinterest, confusion, or hostility. The tone of voice, pauses, volume, pace, inflection, and timing of these auditory cues should be appropriate to the situation. Managers who like their jobs and are comfortable with their role and responsibilities will offer mostly enthusiastic auditory clues, such that each encounter is constructive. This tells people that you are comfortable listening to them and willing to give your undivided attention to help solve problems; that you prefer to praise them for things that are done well, rather than find fault in the few things done poorly. If you are not laughing, your people are not laughing either.

### Total productive maintenance

Machine tools are vital to the manufacture of goods. However, equipment is often treated poorly, and run continuously to failure. Unanticipated equipment down time is the bane of manufacturing. So progressive manufacturers treat equipment as important assets to be cared for to achieve top performance. Total productive maintenance (TPM) is a shop equipment maintenance programme that supports minimization of capital assets and maximization of production output. The goals of TPM include zero unplanned equipment stoppages and optimum machine performance. These are achieved by commitment to established maintenance schedules by both managers and shop operators.

Analogous to TPM for machines is the maintenance of your mind and body. Our personal effectiveness is defined mostly by how we think and feel. So it is important to take care of ourselves so that we will be

available and in operation when others need us. If we have adopted a service-oriented mindset, then we are comfortable with the notion of devoting ourselves to others. Thus, we are willing to meet the expectations of others, even if we receive no acknowledgment for our efforts. But this can not be achieved if we are sick. So everyone should have their own TPM programme to develop right mind and body, to ensure an effective, purposeful, and enjoyable life that others can benefit from. Exercise, read, meditate, eat well, work, reflect, play, maintain a positive outlook, etc., and associate with diverse people that you can learn from.

It is also important to realize the significant contributions that other people can make to help develop one's self-awareness. The people providing constructive feedback are obvious contributors to personal development. What about the critics or people we consider to be our "enemies"? The normal response is to avoid those people or situations that may be aggravating or upsetting, question our intelligence, adversely impact our confidence, or cause us to confront our fears. But since anger is the death of possibilities, we could try to do the opposite of what we feel like doing and instead reflect on the situation to understand what worked well and what did not. We could get closer to the problem, rather than farther way. The problem will likely be encountered again and again if we do not try to seek alternative solutions. But to do so we typically need help from other sources such as books, articles, asking other people what they would do, or asking the critic why he or she is critical. A key competence is the ability to contain one's emotion and open the mind to other solutions (Cleary, 1996; Goleman, 1989). Effective conflict resolution and learning requires the ability to suspend subjective thinking, willingness to change, and to have a confident view of circumstances. Another saying worth remembering is "my harshest critics have been my greatest teachers".

### Continuous personal improvement traps

Any tool has a range of effectiveness, beyond which it becomes useless or even counter-productive. For example, some continuous improvement tools normally applied to the manufacturing environment may not be applicable to pure service businesses. Similarly, the continuous personal

improvement tools previously described require careful consideration in how they are applied to one's self or a large group of employees. The culture must let people make mistakes without fear of rejection, allow sufficient time for the concepts to diffuse through the organization, and be patient as people make the transition away from ineffective life-long work habits and behaviours. It must also set realistic expectations for conformity to the model, and be tolerant of reasonable variation due to individual styles and preferences normally found in diverse organizations.

This section is intended to highlight some of the common mistakes that could be made in the application of this model. For example, one-piece flow in manufacturing seeks to reduce tasks to their simplest components. However, people are not systems reducible to discrete components, since thoughts and actions are produced by the synthesis of a wide variety of information. Some information may be in the form of precisely measured data as presented in charts or graphs, but may also include more ambiguous data such as consumer opinion surveys or biases for certain desired outcomes. Useful data also comes from personal observation, environmental factors, or sensory data that provides needed comfort in decision making. One-piece flow suggests a "do it now" mindset is the best way to get things done. However, this could lead to degenerate outcomes such as the loss of control over one's schedule. This could create a bias for ignoring useful, yet time-intensive, activities such as dialogue with others to develop a better understanding of the marketplace, improving human resource policy, or determining new product investment strategies.

A "do it now" mindset within the continuous personal improvement model will also challenge established thoughts on what constitutes a priority. Prioritization is a tool to help the decision-making process. However, it is often used to aid every decision-making opportunity, and is thus a frequently misused tool. To "do it now" means there is no time to prioritize! No doubt prioritization has real utility in many circumstances, but overuse can become a bad habit that results in underdeveloped decision-making skills. It reinforces the belief that we can not do it all, and does not challenge one to gain resources external to their local environment to get things done.

Prioritization forces most people to work on what is achievable, rather than what needs to be done. Application of the one-piece flow model can have counter-intuitive results in that it should improve one's ability to quickly disposition actions and thus minimize the use of prioritization as a decision-making tool. In addition, rapid disposition of routine business matters will leave more time to do other things. On the down side, experts of the "do it now" method may risk losing sight of higher-level business needs since the strong positive sense of accomplishment achieved by actually doing something and having satisfied employees can be addictive.

The concept of standard work could also be easily misinterpreted. For example, it would not make sense to apply this concept to continuous personal improvement for the goal of making every manager or employee behave in exactly the same way. Standardization could imply to some in the organization that there is no opportunity for interpretation or dissent. Also, management's message can be standardized more easily than each manager's style. The latter may be worthwhile doing to reduce extremely wide variations in style. But certainly nobody would want a charismatic manager to present the company's survival plan to employees in a stale pro forma style. People are dynamic, ever-changing, chaotic systems that can not be standardized in any strict sense.

Managers behaving with a kanban mindset will be severely challenged to provide employees exactly what they need, when they need it, every time. There are often practical limitations, usually caused by systems and procedures that prevent rapid response (and thus must be improved!), such as a slow capital appropriation approval process. There may also be budget, space, or manpower constraints that are not rapidly solvable. Alternatively, employees may have not thought hard enough about how they can get what they need without spending lots of money or breaking new ground. For this situation, there is the saying "spend ideas, not dollars", which is an extremely powerful cost-reducing concept if it can be successfully assimilated by everyone in the organization. Managers, however, are all too often simply unwilling to meet employees' needs, as if generosity is forbidden in the workplace or somehow diminishes power. So the challenge for all managers is to develop a kanban

mindset to improve their on-time delivery performance. Employees should be hearing “yes!” by smiling managers many more times than they hear “no way!” by angry managers.

### An example – root cause diagram

Fishbone diagrams are a commonly used factory floor problem-solving tool that makes apparent the many factors that contribute to an undesirable condition. They are graphical representations of primary, secondary, and tertiary causes related to observed or measured effects. It is an extremely useful tool for determining the root cause of problems, and thus a starting point for establishing workable solutions. Fishbone diagrams are typically used to determine the failure of tangible processes, such as why a machine fails repeatedly, or why quality defects continue to plague certain production operations. They are rarely used by management to analyse the failure of human factors in business settings.

One of the banes of management is getting people to follow management’s lead. A lack of effective communication is often cited, subjectively, and without much supporting evidence, as the root cause of why a shared vision was not achieved. Thus, competitive threats requiring widespread change in business processes are often responded to only half-heartedly by employees. If

communication is ineffective, then management may utilize more direct means to achieve commitment or compliance. This can degenerate into abusive behaviour by management towards employees, which will alienate workers and lead to further erosion of influence. But communication may be only one of many primary causes, which may also be interrelated to other important factors.

Figure 1 shows a fishbone diagram that shows why management often lacks influence with followers, while Table II presents detailed descriptions of the secondary causes and related corrective actions. At least four primary causes have been identified in this example: trust, communication, processes, and environment – and numerous secondary causes. These form the basis of the corporate culture from which management and employees must operate within. Thus, simple explanations for the failure of an initiative, such as ineffective communication, may actually be the result of more complex and highly interrelated corporate cultural and behavioural problems.

### Concluding remarks

The application of continuous improvement tools in manufacturing is most effective when they are used concurrently. The tools and concepts come alive when daily activities and simple teachings are coupled, and can result in significant improvements to corporate

Figure 1 A fishbone diagram showing the primary and secondary causes of why management can lack influence with followers in an organization

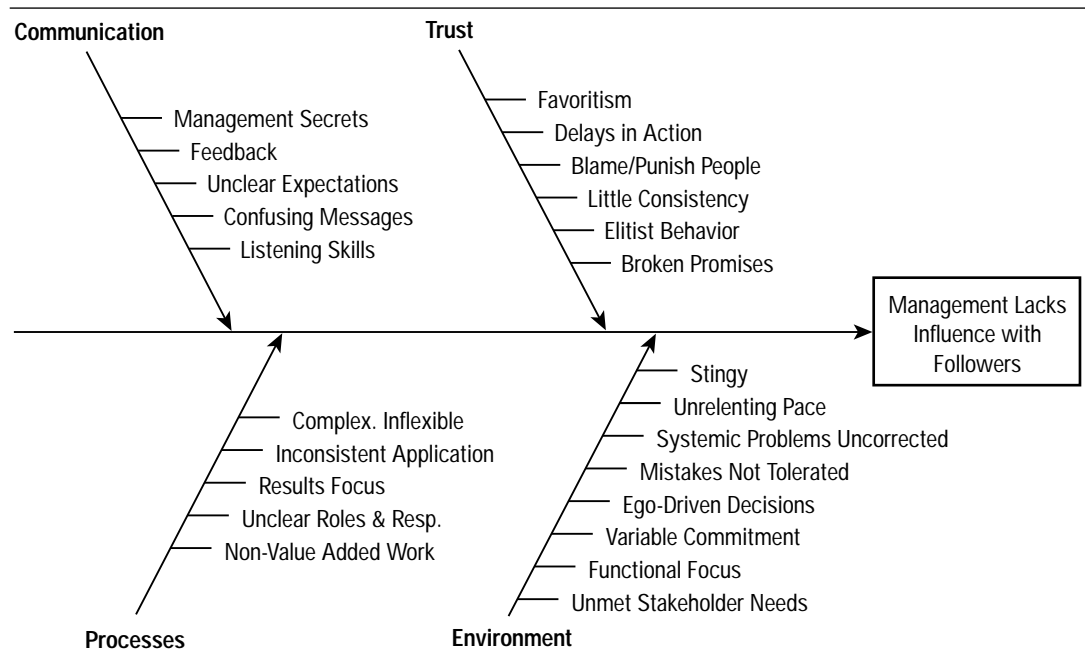




Table II Why management lacks influence with followers

Primary cause	Secondary causes	Secondary cause description	Corrective actions
Trust	Favouritism	Workers perceive management to favour some people over others, such as salaried workers over hourly workers.	Standard work, continuous improvement
	Delays in action	managers hold forums to hear employees' concerns, yet are either non-responsive or slow to respond to workers' needs. Workers' concerns are not understood.	One-piece flow, Kanban
	Blame/punish people	Workers are risk-averse because of fear of failure.	Standard work, continuous improvement
	Little consistency	Management says one thing, does another; does not walk the talk.	Standard work, continuous improvement
	Elitist behaviour	Managers see themselves as superior to workers. Two sets of rules.	Continuous improvement
Communication	Broken promises	Management does not meet its commitments to workers.	One-piece flow, Kanban
	Management secrets	Employees know or believe management withholds information. Knowledge is power mindset. Motives are unclear.	Kanban
	Feedback	Management does not actively provide corrective feedback.	One-piece flow
	Unclear expectations	Managers do not provide simple statements of expectations.	Kanban
	Confusing messages	Management's message is unclear or contradictory.	Visual controls, Audio controls
Processes	Listening skills	Management makes time to hear but does not understand.	Continuous improvement
	Complex, inflexible	Procedures difficult to follow or out of step with business needs. Cumbersome processes demotivate and slow down workers. Management requires seemingly endless study of issues and recommended solutions.	5S, Standard work
	Inconsistent application	Processes and procedures followed arbitrarily.	Standard work
	Results focused	Processes not followed when the need for results take precedence.	Standard work
	Unclear roles and responsibilities	Workers confused about who does what, when, and why.	One-piece flow, Standard work
Environment	Non-value added work	Workers believe their time is wasted doing unnecessary tasks.	Kanban
	Stingy	Managers get all the rewards; workers get few. Workers lack proper tools. Pervasive sense of inequity.	Continuous improvement, Kanban
	Unrelenting pace	Constant pressure to perform. Little recognition for jobs well-done.	TPM, Kanban
	Systemic problems uncorrected	Management fails to help correct problems repeatedly identified by employees. Management lacks detailed understanding of business processes and procedures.	Kanban, One-piece flow
	Mistakes not tolerated	Employees fear taking risk due to known consequences. Managers want to hear only "good news". Preference for who did it, rather than what went wrong.	Kanban, Visual controls, Audio controls
	Ego-driven decisions	Decisions made for the elevation of one's self.	Kanban
	Variable commitment	Managers subvert each other by openly supporting or criticizing strategic direction.	Standard work
	Functional focus	Managers do what is best for their area, rather than for their customers or company at large.	Standard work, Kanban
	Unmet stakeholder needs	Management favours one group of stakeholders over all others.	Continuous improvement

culture and financial performance. However, tools used separately from one another lose their synergistic quality, and can greatly limit efforts to become a lean manufacturer. Likewise, the tools presented in the continuous personal improvement model are interdependent. They offer the potential to serve as a foundation for individuals to become better

skilled at life-long learning and systems thinking. The model also provides a tangible vehicle for reducing personal dependence on external circumstances, and places the resolution of everyday challenges within your own hands.

The continuous personal improvement model provides a simple framework for

overcoming common barriers that limit personal performance in the workplace. Continuous personal improvement is a methodology for achieving effective generative relationships, making meaningful contributions, and improving one's ability to view problems as worthwhile challenges and positive experiences. This will not come easily. It takes substantial effort to develop self-awareness and break away from life-long teachings, biases, and assumptions that inhibit achieving these goals. In addition, dysfunctional work environments may not seem conducive to the practice of continuous personal improvement, when, in fact, they are actually the prime environment to develop such skills. If you are a supervisor or manager, you should believe that you work for your employees and constantly strive to do these things very well. The set-backs will be many and varied, but should never lead to the abandonment of worthwhile goals. Since the continuous personal improvement model is process-oriented, it is also useful for developing behaviours that can help people in everyday life with friends and family.

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