

KAIZEN MANAGEMENT PHILOSOPHY

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ABSTRACT

The spirit of Kaizen is all about achieving improvement by taking small steps instead of drastic, rigorous changes. It involves setting and continually improving standards without large capital investments. The objectives of Kaizen include eliminating waste, or activities that add cost but not value, just-in-time delivery, production load leveling of amount and types, standardized work, paced moving lines and right-sized equipment. Basically, Kaizen takes processes, systems, products, and services apart then rebuilds them in a better way. Kaizen goes hand-in-hand with that of total quality control.

Key words: Kaizen, Total Quality Control, Toyota Production System, Just-in-time, Innovation

INTRODUCTION

The foundation of Kaizen was laid in Japan after the Second World War, when the country was attempting to rebuild factories and rethink many systems. The concept of Kaizen began to be formed and it took off in the 1950s. According to Masaaki Imai, the father of Kaizen strategy, it is the most important concept of Japanese management – the key of Japanese business success. The Kaizen principle is based on ancient Japanese tradition and philosophy insofar as it seeks harmony through continuous improvement. In its contemporary form, it is used both to improve and streamline corporate processes as well as to gain developments on a personal level. The meaning of improvement in Kaizen should not be seen in isolation, but in a wider context, which is the real meaning of this expression borrowed from the Taoist and Buddhist tradition, focusing on improvement for all the society and bringing betterment for all. This tradition has been kept alive in Japan until today. Kaizen is a philosophy of management as far as it stems from the view that any particular improvement should not be made to the detriment of the customers and wider community. Therefore, we should always have this wider context in mind when talking about the specific concept of Japanese management which integrates all the components within a dynamic whole and clarifies the underlying importance of social harmony.

In Japanese, Kaizen means “small, incremental, continuous improvement,” and the English translation is “continuous or continual improvement.” Kaizen is a philosophy that focuses both on the process and the results. According to Masaaki Imai, Kaizen is an umbrella concept. (Imai, 1986) It is a process that, when done correctly, humanizes the workplace, eliminates unnecessarily hard work (both mental and physical), teaches people how to do rapid experiments using scientific methods, and how to eliminate waste in business processes. Kaizen is also a most frequently used word in Japan. One can hear of Kaizen in the commercial exchange balance of Japan, in the system of social security or productivity of Japanese companies etc.

The distinguishing feature of Japanese management is process oriented, and not uniquely goal oriented way of thinking. As a matter of fact, the main difference between Japanese and Western management is in its focus on improvement of all components of production and business process, particularly on such factors as stimulation and involvement of workers and medium ranking

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managers in the decision making process. The outcome is a process oriented management, with its relevant criteria, against a result oriented management focused on control. While process oriented criteria require long term perspective, result oriented criteria, on the other hand, are focused on short term benefits. Process oriented thinking has been one of the key components of the competitive advantage of Japanese industry in the world markets.

Such a difference of focus between Japanese and Western management pervades not only the strategy of improvement of productivity itself, regardless of the working environment, but the concept of quality control itself. Usually, when quality control is concerned, we think only about the quality of products, but Kaizen is also about human quality, meaning a greater emphasis on the education and training, as well as involvement in the quality control process of all employed. There is an axiom in Japanese productivity system which says: "Quality control begins and ends in training". In one word, the management is tasked to improve the business culture by developing quality and motivation in the human resources field.

THE PHILOSOPHY OF KAIZEN

There are five underpinning principles to kaizen. The first is a heavy reliance on teamwork, in which everyone's opinion is valued and considered, involving their active participation in the form of suggestions aimed at continuous improvement, even when a system appears to be functioning adequately. Kaizen philosophy recognizes that there is always room for improvement. Finally, the system uses quality circles, groups of workers who meet and work together to solve problems and come up with innovative changes. This feature of Kaizen philosophy is clearly based on the Japanese cultural tradition, which puts greater emphasis on group consensus building. The focus on human resources building within Kaizen strategy has anticipated the post-modern developments in the field of management and competitive advantage.

Kaizen is a system that involves every employee - from upper management to the cleaning crew. Everyone is encouraged to come up with small improvement suggestions on a regular basis. In companies as Toyota and Canon, a total of 60 to 70 suggestions per employee per year are written down and implemented. Suggestions are not limited to a specific area such as production or marketing. Kaizen is based on making changes anywhere that improvements can be made.

Kaizen involves setting standards and then continually improving those standards. To support the higher standards, Kaizen also involves providing the training, materials and supervision that is needed for employees to achieve higher standards and maintain their ability to meet those standards on an on-going basis. The term "standard" can be misunderstood as something rigid, unchanging, and absolute. If it is misunderstood in this way, it becomes an obstacle to Kaizen.

In business Kaizen encompasses many of the components of Japanese businesses that have been seen as a part of their success. Quality circles, automation, suggestion systems, just-in-time delivery, Kanban (notice board, as a form of integrated control of part supplies) and 5 S are all included within the Kaizen system of running a business. As a set of principles, Kaizen is often presented in the form of guidelines:

1. Discard conventional fixed ideas.
2. Think of how to do it, not why it cannot be done.
3. Do not make excuses. Start by questioning current practices.
4. Do not seek perfection. Do it right away even if it will only achieve 50% of target.
5. If you make a mistake, correct it right away.
6. Throw wisdom at a problem, not money.
7. Ask "WHY?" five times and seek root causes.
8. Seek the wisdom of ten people rather than the knowledge of one.
9. Don't ask workers to leave their brains at the factory gate.

THE DISTINCTIVE FEATURE OF JAPAN'S COMPETITIVE SUCCESS

In his *Kaizen: the Key to Japan's Competitive Success* published in 1986 that introduced Kaizen to the Western corporate world, Masaaki Imai defined it as: "a means of continuing improvement in personal life, home life, social life, and working life. At the workplace, Kaizen means continuing improvement involving everyone—managers and workers alike. The Kaizen business strategy involves everyone in an organization working together to make improvements without large capital investments." (Imai, 1986) Managers are encouraged to improve the efficiency of existing infrastructure instead of investing in more of the same. "And that," says Imai, "can happen only if you are familiar with every inch of your *gemba* (workplace)".

The objectives of Kaizen include eliminating waste or activities that add cost but not value, just-in-time delivery, production load leveling of amount and types, standardized work, paced moving lines and right-sized equipment. Basically, Kaizen takes processes, systems, products, and services apart then rebuilds them in a better way. Kaizen goes hand-in-hand with that of quality control.

Kaizen does not view problems as negative but rather sees them as positive opportunities for improvement. To implement change, Kaizen finds, reports, and fixes problems. This program encourages rewarding employees who expose inefficiencies and other issues. Kaizen is about taking action to generate suggestions then implementing productive ideas as soon as possible.

Kaizen results in improved productivity and quality, better safety, faster delivery, lower costs and greater customer satisfaction. Furthermore, employees find work to be easier and more enjoyable—resulting in higher employee morale and lower turn-over. Outcomes include:

- Reduction in waste in areas such as inventory, waiting times, transportation, worker motion, employee skills, over production, excess quality, and in-processes
- Improvement in space utilization, product quality, use of capital, communications, production capacity, and employee retention
- Immediate results. Instead of focusing on large, capital-intensive improvements, Kaizen focuses on creative investments that continually solve large numbers of small problems. The real power of Kaizen is in the on-going process of continually making small improvements that improve overall processes and reduce waste

A key element of the Toyota Production System (TPS) is Kaizen. The Toyota Production System is frequently compared to a house with two pillars. One pillar represents *just-in-time* (JIT), and the other pillar the concept of *jidoka*. The house will not stand without both pillars. JIT is fairly well understood, but *jidoka* is crucial, since it upholds the entire system. A lot of failed implementations can be traced back to not building this second pillar.

What does *jidoka* mean? A common answer to this question is "autonomation" or "automation with a human touch." This is usually illustrated by example of a machine that will detect a problem and stop production automatically rather than continue to run and produce bad output. The principle's origin goes back to 1902 when Sakichi Toyoda invented a simple but ingenious mechanism that detected a broken thread and shut off an automatic loom. That invention allowed one operator to oversee the operation of up to a dozen looms while maintaining perfect quality. Toyota refers to every process, whether human or automatic, being enabled or empowered to autonomously detect abnormal conditions and stop. When JIT and *jidoka* work together, they form the engine of kaizen that drives your system to get better every day. There are two things that are part of every Toyota employee's job:

1. Follow the standard
2. Find a better way

This is the essence of Kaizen. These simple yet profound rules are what drive every employee to maintain safety, quality, low cost, and on-time, striving to make it better. To ensure that the Kaizen

mindset is being followed and that every individual's creativity is being fully utilized, the following three rules are commonly prescribed:

1. Spend no money
2. Add no people
3. Add no space

Kaizen will reduce costs, space requirements and cycle time. Of course, since it is continuous, as soon as one set of problems are solved, new problems occur which must be overcome. By going through this process, the production system becomes stronger and stronger. The results are:

1. 65% reduction in work-in-process
2. 50% reduction in manufacturing space
3. 45% improvement in throughput time (lead-time)

The Japanese management encourages employees to generate a great number of suggestions and works hard to consider and implement these suggestions, often incorporating them into the overall Kaizen strategy. Management also gives due recognition to employee's efforts for improvement. An important aspect of the suggestion system is that each suggestion, once implemented, leads to an upgraded standard.

According to the Japan Industrial Standards, implementing quality control necessarily involves the cooperation of all people in the company, including top management, managers, supervisors, and workers in all areas of corporate activities. Quality control carried out in such a way is called company-wide quality control or total quality control (TQC).

TOTAL QUALITY CONTROL

Total quality control (TQC) means organized Kaizen activities involving everyone in a company – managers and workers – in a totally systemic and integrated effort toward improving performance at every level. It is to lead to increased **customer satisfaction** through satisfying such corporate cross-functional goals as quality, cost, scheduling, manpower development, and new product development. In Japan, TQC activities are not limited to quality control only. Elaborate system strategies have been also developed with the view of improving managerial performance at all levels.

Kaizen is the philosophy of incremental continuous improvement with involvement of everyone. At first glance everything is pretty clear and simple - what you need to do is to improve the processes around to make things more efficient. However the first obstacle which appears on the way to improvement usually starts with few questions: what to improve, why to improve, who shall improve, where to improve, how far to improve, how much it will cost. All these questions are answered by Kaizen. This philosophy stresses the high importance of the working environment as the actual place of improvement and the source of information regarding improvement areas. Everything what creates wastes of resources - time, emotions, financial resources, raw materials, unnecessary steps - might be improved. The real life advantages of this approach were observed in the case of Toyota Motor Corporation. The company sought to maximize the waste elimination and error-free production by introducing real time alert system on the operations level. This system allowed ground floor employees to stop the production line if problems occurred. The major message of Imai about Kaizen is that continuous improvements cost nothing but might significantly improve the overall process. However, prior to rushing to improving drawbacks an individual shall evaluate the consequences of change as well as the degree of its urgency and its usefulness for the work process.

In the 1980s, with the globalization of Japanese businesses, kaizen became globally known. According to Imai Kaizen "...was originally developed in Toyota and spread among other Japanese manufacturers as they gained fame in the international market for higher quality products."(Imai,

1986) Following their expansion worldwide, Japanese multinational manufacturing companies tried to duplicate the quality management methods within their new factories. When Japanese firms endeavored to increase local procurement of intermediate inputs, local suppliers were requested to conform to Japan's quality standards. Thus, Japanese companies often assisted their local partners in learning the Kaizen philosophy and practices. Accordingly, the Japan International Cooperation Agency (JICA) began to rely on the Kaizen management style to transform the industrial activities of a number of developing countries.

The Japanese make a distinction between Kaizen and innovation: Kaizen is gradual, uses small steps, conventional know-how and a lot of common sense, while innovation is viewed as being more radical because it comes in big steps. Again, there are discrepancies in the concept of innovation between Japanese and Western companies. Innovation in the West is seen as a unilateral, costly and dramatic breakthrough, the results of which are tremendous. On the contrary, Kaizen effectiveness is not immediate but brings about comprehensive and long term results. The fact that Kaizen, in contrast with the Western concept of innovation, does not involve sophisticated techniques and state of the art technology, as well as big investments, is crucially important from the point of view of SME in the actual global economic crisis.

Another difference of approach between Japanese and Western companies is related to the concept of total quality control (TQC). In Japan it is based on the input of the market, rather than the output of products. The Japanese are traditionally sensitive toward the needs of the customers and this is an important aspect of Kaizen as a strategy of total quality control. Its orientation toward the customers is therefore crucial. This is one of the "secrets" of the success of Japanese products worldwide.

For most Western companies Kaizen involves a significant change in the corporate culture. This is the key. The attitudes of employees, from top management down to new hires will need to change. Kaizen is not a formally adopted method, but involves a transformation of the working environment and needs to become something all employees do because they want to, and because they know it is good for them and the company.

When *The Machine That Changed the World* was first published in 1990, Toyota was half the size of General Motors. Today Toyota is the world's largest auto maker and is the most consistently successful global enterprise of the past fifty years. This management classic was the first book to reveal Toyota's lean production system that is the basis for its enduring success.

In "Kaizen," Mr. Imai reduced much of his theory to simple and strait forward insights: What needed most improvement in most businesses, he argued, were QCD, or Quality, Cost and Delivery. That tendency, continued in *Gemba Kaizen*. The nutshell of this book is the idea of *gemba*. Roughly translated, *gemba* is where the action is. In an industrial or corporate setting, *gemba* is the "place where products or services are formed." The idea is interesting because *gemba* is a spatial concept, not an idea used to organize activity, as most management theories are.

But *gemba* does have the effect of shifting attention from individual employees to the workplace and thus looking at the spatial arrangements that impose limitations on productivity improvements. American companies tend to regard space as incidental, except perhaps as it reflects hierarchy and power. Most American executives would say the real business of business takes place in the executive suite. The factory floor simply executes the plan.

Gemba Kaizen offers an alternative to that analysis. Mr. Imai would probably say he could walk the floor or office complex of any American company and discern where the real action is — the flattening of the humps that services must get over to provide genuine customer satisfaction, or the moment in the manufacturing process when it is clear a quality product will roll off the assembly line.

CONCLUSION

From that point of view, Kaizen management is providing a tool to adapt to the global competition by eliminating waste in the process of production, changing corporative culture and encouraging cross-functional links between the managerial staff and production workers, as well as combining between top down and bottom up management.

The results of the Japanese management throughout the last decades based on the concept of Kaizen have been outstanding. Since its inception, the implication of Kaizen for businesses and SME has outgrown its initial scope in many parts of the world. It is studied in various universities and presents a strategy for companies faced with the actual economic crisis and in need to keep their qualified manpower by eliminating waste and improving production and management according to the principles of Kaizen.

REFERENCES

- Cheser, R. (1994). Kaizen is More Than Continuous Improvement, *Quality Progress*, April, pp. 23-26.
- Imai, Masaaki (1986). *Kaizen: The Key to Japan's Competitive Success*, McGraw-Hill Publishing Company, New York NY.
- Kandebo, S. W. (1995). Sikorsky Boosts Quality, Cuts Costs with Kaizen, *Aviation Week & Space Technology*, 1 May, pp. 39-40.
- Lillrank, P., N. Kano (1989). *Continuous Improvement: Quality Control Circles in Japanese Industry*, Center for Japanese Studies, The University of Michigan, Ann Arbor MI.
- Robinson, A., ed. (1991). *Continuous Improvement in Operations: A Systematic Approach to Waste Reduction*, Productivity Press, Cambridge MA.
- Stuart, M., E. Mullins, and E. Drew (1996). Statistical Quality Control and Improvement, *European Journal of Operations Research*, Vol. 88, pp. 203-214.
- Womack P. James, Jones T. Daniel, Roos Daniel (1990). *The Machine That Changed the World*, Free Press.