

KAIZEN

LEAN THINKING TO IMPROVE YOUR MINDSET
AND INCREASE PERSONAL PRODUCTIVITY



SOSUKE TAKAHASHI



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**Lean Thinking to Improve Your Mindset and
Increase Personal Productivity**

Sosuke Takahashi

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Chapter One

Kaizen

Introduction

There are three (3) terms, otherwise known as Zen, that were adopted by the Japanese; **wabi-sabi, ikigai, and kaizen**. Of all the three, kaizen is the most developed, improved philosophy. It is not difficult to understand and apply to life. It can be easily adopted, and when the principles of kaizen are applied to everyday life, it will bring about a long-lasting change in multiple areas of life such as finance, health, relationships, etc.

In 1980, there was nothing new about the management techniques focusing on employee involvement and empowerment via interactive communications, teamwork approach, and the improvement of job design, but some of these techniques seemed to be more effectively implemented by the Japanese companies more than other companies. The business lesson gotten from them was that they demonstrated a greater commitment to the philosophy of continuous improvement than other companies did in their quest for global competitiveness. This brought about the term **Kaizen**.

Kaizen, in Japanese, is a noun that is used to mean improvement. This improvement can be big, small, continuous, or one-time. Sometimes, it is used in relation to *kungfu* (martial arts), where the idea of improvement is slow but meticulously encouraged. Kaizen was achieved greatly in the business sector of the world. This, we would be looking at in great detail

Kaizen is defined as continuous improvement, which involves every person in the organization from top management to the middle and the lower managers. The primary concept of Kaizen is engraved in the mind of every worker and manager. They do not even realize that they are thinking the kaizen way. They do not realize that they are thinking of it as a customer-driven strategy for organizational improvement.

Kaizen is a broad knowledge that consists of different technologies such as the Lean Production System, 5S, the 7 QC tools, the TPS (Toyota Production System), and others. These technologies are used to pursue the

core value of kaizen. Kaizen was first used in the manufacturing industry in Japan as techniques and tools for the improvement of productivity and quality. It is recognized all over the world. Though people have different perspectives and views on the scope of kaizen and its understanding, we would be placing the core values in the creation of attitude shared by the members of any organization who would want to pursue the advanced productivity and quality level consistently. They, however, do not just apply the management method of the organization. The kaizen approach is easily adaptable and flexible.

Characteristics of Kaizen

Some characteristics of Kaizen are;

- Participatory: Kaizen participation is from the top management down to the lower management (front line workers). Kaizen encourages suggestions from the workers in the organization.
- Continuous: The activities which consist of small efforts daily when added up result in massive changes.
- A scientific approach, based on some statistical data.
- Economical: It emphasizes using wisdom, which is more than money. It is also applicable when there are limited resources.
- Universal: This means it is applicable in every industry, size, country, sector, and organization too.

Effects of Kaizen

Some of the effects of kaizen are;

1. It improves productivity, quality, and service level.
2. It reduces the cost and delivery time.
3. Kaizen enhances communication and also builds a network.
4. It creates an organization that evolves and also develops as it goes.
5. It changes the mindset of both workers and managers.
6. It also creates a very comfortable and safe work environment for everyone.

The PDCA Cycle

The fundamental of Kaizen is repeating the PDCA cycle. What do I mean by the PDCA cycle? PDCA means the Plan-Do-Check-Act cycle. It is otherwise known as the Deming cycle. With this cycle, everyone in the organization acquires the attitude and the mind to pursue a higher level of productivity and quality. This leads to the improvement of work quality, quality, cost, and delivery (QCD) improvement. Kaizen enables organizations to develop engagement, discipline, and also teamwork of individuals and also helps strengthen their capabilities to improve both the quality and productivity of goods and services in the organization.

- **PLAN:** This refers to the selection of the company's production theme, understanding the current status of the company, and setting new objectives, analyzing data for the identification of the root causes of quality problems.
- **DO:** This is simply the process of creating and establishing countermeasures that are based on the already analyzed data.
- **CHECK:** This is the confirmation of the effects of the established countermeasures.
- **ACT:** This is where the revision of the standards of the previous recurrences begins, and the reviewing of all processes.

For each stage, some tools and practices can be used. They are as follows;

PLAN

- a. Pick a project: You can make use of the **Pareto Principle** . This would be explained further down this book, so pay attention.
- b. Gather enough data: Make use of Control charts and histograms.
- c. Find causes and effect: A Process Flow Diagram can help.
- d. Pick the likely causes: Scatter diagrams and the Pareto principles can be used.

- e. Try out solutions: Make use of the “whom,” “why,” “what,” “where,” “when” and “how” methodology.

DO

- a. Implement the tried solutions.

CHECK

- a. Monitor the results generated from the Histograms, Control charts, and Pareto.

ACT

- a. The new process should be standardized.

A successor, the SDCA cycle, follows a successful PDCA cycle. As PDCA has to do with improvement, SDCA has to do with maintenance. The S in SDCA stands for standardization and also support for new situations.

The process of standardization is an essential one with key features that would help in an industry. They are;

- i. Provide ways to measure performance during production.
- ii. Represent the easiest and the safest way to do the jobs.
- iii. It provides a basis for training the employees in the company.
- iv. Help prevent the recurrence of errors and also minimize variability.
- v. Show the relationship between effects and causes.

It is said that there is a lot of controversy as to what kaizen signifies. It is a philosophy for process improvement, which can be traced to the meaning of the words ‘Kai’ and ‘Zen.’ Translated, it means ‘to break apart and investigate.’

According to the Kaizen Institute, it is defined as continuous improvement, which has already been said from the beginning. It also means using one’s common sense, a more rigorous, scientific method using statistical quality control and data management and the adaptive framework of the values, the belief that keeps the management and workers in the organization focused

on no defect. This is the philosophy of not being satisfied with previous accomplishments.

Now, this improvement begins by first the admittance that every organization has problems, and this provides different opportunities for change. This improvement revolves around constant yet continuous improvement, which involves everyone in the company, and it depends on teamwork to challenge the status quo of the organization.

Kaizen helps change the mindset of people. It functions as an instrument of industrial policy, and as a means of developing the core capacity of people.

Need For the Application of Kaizen in Countries

There are specific issues in the manufacturing industry across the continents, particularly Africa, that require the need for the application of Kaizen. They are as follows;

- The manufacturing industry in Africa has a very low job creation rate for young generations.
- The Gross Domestic Product (GDP) share is small with very low productivity.
- It also consists of a small amount of medium-sized and large enterprises and a large number of small enterprises.
- Company employees' educational background is limited to just primary education or even less than that, which makes them barely qualified for working at modern industrial facilities.
- Non-labor management systems and traditional practices are still in place.

Though these are the issues faced in most manufacturing industries, some companies have overcome these problems and adopted the modernized labor management system. Another challenge in African countries is the development of medium and high-tech sub-sectors and increasing the values added in the industry. These countries do not have to copy the industrial development patterns in the Asian countries, but lessons and experiences from those countries can be learned to create and conceive new models for the development that would meet the needs of the African countries. Though they try to develop some models, the promotion of

industrialization and increase in competition remains a common challenge at the national level in such countries. The capabilities of organizations fall into capability management and workforce adaptability, which is strengthened by kaizen.

Currently, some countries in Africa have begun the introduction of Kaizen in the educational sector. They reflect the understanding of the value of Kaizen. Kaizen practice provides employees with a great effort to learn some soft skills which are required in the workplace. Some of these skills are a positive attitude, good communication with managers and coworkers, compliance with the rules made in the workplace, and commitment.

Development and Evolution of Quality and Productivity Improvement in Japan

Kaizen was developed in different companies in Japan that had one way or another, learned some management skills and techniques from the United States and Europe also. These techniques were discovered under the guidance of the organizations that are in charge of the promotion of quality and productivity improvement.

After the Second World War during the economic reconstruction period, the products of Japan were considered quite cheap but of very low quality; as the saying goes, what you pay for is what you get. For this kind of reputation to be overturned, the quality and productivity improvement move emerged, and one of the organizations that played a significant role in that movement was the Union of Japanese Scientists and Engineers (JUSE). From time to time, they conducted several educational programs on training programs on the statistical management techniques and also quality control for corporate owners, as well as managers. With these programs, companies began to learn the importance of quality control and also started to commit efforts at the facilities of production. Voluntary groups were then formed in every step of production to conduct a variety of workplace activities for improvement, some of which are waste elimination (Muda-Dori), cost reduction, work safety management, defect reduction, and the 5S – Sort, Set-in-order, Shine, Standardization and Sustain.

The JPC (Japan Productivity Center) was established in 1955 by parties representing labor unions, academia, and companies. JPC acted as a promoter of the productivity movement while succeeding in becoming a

nationwide movement. Since 1955, the JPC has sent many missions for industrial tours to different modern production facilities in advanced countries, including the United States, to learn the techniques of quality and production. The results attained were shared at debriefing sessions, which were held throughout the country and were also compiled in reports for distribution to interested companies. This method helps to promote quality and productivity improvement in Japan as a whole.

Deep into the 1980s, a large number of Japanese companies launched some initiatives to help improve quality and productivity as a form of organizational effort by working extremely hard on the quality of their products from the combined viewpoint of manufacturing, developing, and maintaining good products and services. At this point, the TQC (Total Quality Control) was born. A lot of top-ranking companies in Japan, Sony, Yamaha, Honda, Nissan, Toyota, Canon, Panasonic, and Suzuki made efforts at the Total Quality Control all the while, aiding their production and quality to be positioned topmost in the world. Now, these efforts made were not just limited to the production sector along but have also been undertaken by the public and service sectors for the improvement of customer satisfaction. The modification of Kaizen attracted the attention of some corporate managers, scholars, and engineers in the United States and Europe who came to Japan to study the critical factors of the strength of Japanese companies to strengthen their businesses. After this, a lot of companies then imported the quality and production management skills and techniques of Japan and restructured them to meet the business environment of the Americans and the Europeans too.

As mentioned earlier, the quality and production techniques were first introduced from the United States to Japan, and it has been modified as time went by and also improved by Japanese manufacturers based on their different sizes, sectors, production environment, and other related factors. TPS (Toyota Production System), which was mentioned at the start of this book, is a popularly known management system that was developed. There are two major concepts in which TPS is based; **the jidoka and the Just-In-Time**. The Jidoka is for stopping a malfunctioning machine immediately to prevent the production of defective products. The Just-In-Time, on the other hand, produces as many products as is needed to avoid creating excess

products and also storing too many items at the same time, ensuring there is a smooth production.

Key Concepts of TPS

1. **Jidoka:** As mentioned before, Jidoka is about highlighting and visualizing problems. Product quality must be built during the process of manufacturing. For example, if a defective part is discovered or equipment malfunctions, the machine which is affected stops working automatically, thereby making the operators cease production and allows them to tend to the problem and correct it. What does Jidoka mean? It merely means that when standard processing is completed, the machine stops. It also means that whenever an equipment problem arises or there is a quality problem, the machines stop on its own and detects the problem all by itself, and because of this, only the products that satisfy the quality standards of the company would continue to be processed on the finish line. Since in this, the machine stops automatically when a problem arises or when its processing is complete, it is communicated on the problem display board (ondon). With this, operators can continue performing work at another machine and also easily identify anything that might have caused a problem to prevent their reoccurrence. This means that different operators can be in charge of as many machines as there are in the company, thereby giving rise to higher productivity, at the same time allowing continuous improvements, which lead to a greater capacity for processing.
2. **Just-In-Time:** This has to do with the improvement of productivity. This process allows for making only the needed items when it is required and in the amount it is required. For this system to function right, all the parts made and supplies must meet the correct quality standards already set by the company, and it is achieved through Jidoka. In this particular system, the production of quality products is efficient through the elimination of waste entirely, unreasonable requirements on the production line, and also inconsistencies. For example, for a vehicle to be delivered by a customer as quickly as they

want it, the vehicle is built efficiently within a concise period while adhering to the following rules;

- a. Before a vehicle order is received, there must be the issuance of production instruction to the start of the vehicle production line as quickly as possible.
- b. The assembly line in which the vehicle would be made must be stocked with the right number of parts needed for the assembling of any vehicle ordered.
- c. The assembly line must be able to replace the parts which have been used by retrieving the same number of parts from the preceding process.
- d. Finally, the preceding process must be stocked with a minute number of the part types and also produce only the number of parts that have been retrieved by the operator from the previous process.

Masaki Imai made it known that kaizen is an umbrella concept that embraces continuous improvement in the activities of an organization. It is also said that the job of improvement in any establishment is not finished as their status quo is always challenged, every minute. When did the kaizen technique explode? It became famous when it was used by Toyota to become the king of the automobile world. Instead of just undertaking large projects, the staff of Toyota was encouraged to identify problems in the company, no matter how little they may seem. They were allowed to trace the grassroots of the problems and also find the right solutions to them.

The Japanese manufacturing industry usually utilizes two approaches. They are; the scientific approach, which is based on data management and the bottom-up approach, which is led by a small group such as the QC Cycle. The result of the broad quality and productivity improvement initiatives that were undertaken by a large number of companies in Japan, their production rate has moved from poor to excellent, and this has made Japan the “nation of world quality.” The key factors for rapid economic growth in Japan were analyzed by Dr. Ezra Vogel in 1979, in his book titled Japan as Number One: Lessons for America, and also the highly valued Japanese management, which includes the Kaizen initiative.

Let us look at this example;

In 1990, a research team of MIT (Massachusetts Institute of Technology) studied the Toyota Production System to find sources of the competitiveness of the Japanese auto companies and then published a book with the title, “The machine that changed the world.” In this book, TPS was generalized, reorganized, and then renamed as the “lean production system.” It was also named as the “six Sigma,” which was later produced and developed by Motorola in 1980. It was derived from Japan’s QCC characterized by the bottom-up approach and reliance on unexpressed knowledge. It was later modified to take the top-down approach. It was centered on quantitative evaluation incorporating some statistical techniques which had to do with data management.

Later on, it was developed further by the General Electric (GE) Company. It was applied for the process innovation of the entire management system. In this present time, the “six” Sigma and the lean production system, which were later combined to become “Lean and Six Sigma,” were applied as representatives of the western quality and productivity improvement techniques.

Previously, we mentioned the approaches and techniques used by the Japanese and the Americans and Europeans for the improvement of quality and productivity. These techniques have evolved greatly via mutual learning and competition. Below is the comparison of approaches between the two, or should I say, three nations?

Table 1.1: Comparison of Japanese and US/Europe Approach and Techniques

Japanese Approach and Techniques	US/Europe Approach and Techniques
<ul style="list-style-type: none">• Human-oriented <p>Priority is placed on the utilization of wisdom from humans and their experiences instead of innovative</p>	<ul style="list-style-type: none">• System-oriented <p>They first rely on this upgrading of their systems, facilities, and methods before allocating other</p>

techniques, resources, and investments.	resources and the right beings to make use of them.
<ul style="list-style-type: none"> • Combination of the bottom-up and top-down approach <p>This involves every member of the organization or company, from the top managers to the lower managers. Here, everyone is expected to contribute ideas for greeter improvement.</p>	<ul style="list-style-type: none"> • Top-down approach <p>Not every member of the organization is expected to contribute their ideas. Instead, top managers establish the system, and the rest of the managers (middle and lower) are to follow instructions as directed by the people in command.</p>
<ul style="list-style-type: none"> • Site-oriented <p>In this approach, the organization values ideas, observations, and trials at the specified site. Also, suggestions from every worker are welcomed.</p>	<ul style="list-style-type: none"> • Management-oriented <p>In their respective organizations, professional managers establish the entire systems, and the people underneath follow instructions given.</p>
<ul style="list-style-type: none"> • Growth in business is obtained through the development of human resources <p>Making use of existing human resources and other resources comes first.</p>	<ul style="list-style-type: none"> • Growth in business is obtained through system reforms <p>Here, innovation and reformed systems come first before the allocation of the necessary human resources needed for their operation.</p>
<ul style="list-style-type: none"> • Process-oriented <p>Both the results and processes are important. Whenever a result seems wrong, they try to identify the causes in the process that</p>	<ul style="list-style-type: none"> • Result-oriented <p>Here, the results are very important as the process brings about good results, making it a good process.</p>

brought about such a result and then attempt to modify the processes.	
<ul style="list-style-type: none"> • Gradual advance <p>Small yet step by step improvements are made, and its accumulation leads to a huge difference eventually.</p>	<ul style="list-style-type: none"> • Immediate change <p>Immediate yet prompt results matter. A more drastic method that can bring about a great change quickly is adopted.</p>
<ul style="list-style-type: none"> • Adoption and utilization of basic tools <p>This approach begins with very simple actions that are on basic tools and methods and then later apply advanced techniques and tools when necessary.</p>	<ul style="list-style-type: none"> • Adoption and utilization of sophisticated techniques <p>From the start, this approach makes use of systematic yet sophisticated techniques, including statistical tools.</p>

The essence of kaizen is that people who perform any task in the company are very knowledgeable of the task, and by showing confidence in their capabilities, owning the process is increased to a higher level than its initial one.

This particular team effort encourages innovation and also change, and all these involve every layer of employees. Every wall disappears for more productive improvements. Kaizen is everyone's business and not just an approach to competitiveness in the manufacturing industry. This is because it is based on the fact that everyone is interested in improvement. Kaizen helps make the job of every individual easy by dissecting them, studying each part, and making improvements where necessary. This message is not for one person in the organization but to everyone in it because everyone is a contributor. Kaizen for each individual is an attitude for continuous improvement for them and the company.

According to Masaki Imai, there are three pillars of kaizen. He stated that the management and the employees of an organization must be able to work

together to fulfill the requirements of the pillars. For the success of this, he places three major factors that must be taken into account, and they are;

- a. The visual management
- b. The role of the supervisor in the organization
- c. The importance of creating a learning organization and training.

The Great Pillars of Kaizen

1. **Housekeeping:** In Japanese, the workplace is known as Gemba. It is the process of managing the workplace majorly for improvement. The Gemba was introduced as a place where value is added to the services of products before they are passed to the next process of production. For this purpose, a tool of methodology was used. It is known as the 5S. It was derived from the first letters of the Japanese words, which also referred to the five practices for a manageable and clean work environment. The 5S are Seiri (organization), Seiso (purity), Shitsuke (discipline), Seiketsu (cleanliness), and Seiton (tidiness). In equivalence to the English words, they mean, sort, and straighten. Sweep, sanitize, and sustain the work environment. The 5S helps provide insights into the orderliness of a working environment. For manufacturing and non-manufacturing organizations, there are specific criteria they must meet; cleanliness, safety, and ergonomics. The Five S helps evaluate the feedback of employees concerning a product, the company thoroughly, and also each other. Presently, it has become an essential tool for every organization engaged in manufacturing. The practice of the 5S’s would place manufacturing organizations at world-class status.

Table 1.2: The 5S of Kaizen Activities

Seiri	Seiri means to sort what is not needed from what it. For this to be done, use the red tag system to tag items that you consider not useful. Also, everyone should be given a
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	chance to indicate if the items are needed or not before eliminating them. Any item that has been red-tagged should be sold to scrap dealers, given away, sold to employees, or trashed.
Seiton	Seiton is to straighten the items which must be preserved; must be kept. These things should be made visible. Tools should be pegged and outlined so that they can easily be identified via their location. Apply the rule which states that there is a place for everything, and everything has its place.
Seiso	Seiso means to scrub everything that is left. Ensure they are clean and paint them if possible, to provide a more eye-catching and eye-pleasing appearance.
Seiketsu	Seiketsu has to do with the spreading and checking of routine. When there is an improvement in any selected kaizen area of a company, others would want to be trained also. Give them that training and the time to improve their work area in the company.
Shitsuke	Shitsuke has to do with standardization and discipline of self. First, establish a rather clean schedule and ensure that you make use of downtime to clean and straighten your work area.

There are certain benefits attached to the 5S's, some of which are;

- a. The creation of clean, pleasant, and safe working environments for the employees.
- b. It revitalizes the workplace and also improves the motivation and morale of the employees in the organization.
- c. It removes waste by minimizing the need to look for tools. This makes the work of the operators very easy.
- d. It helps reduce strenuous work while also freeing up the workspace.
- e. There is a sense of belonging already created in the workplace, and love is shared among the workers therein.

2. **Elimination of waste:** In Japanese, waste is called Muda. These wastes are activities that do not add value to the workplace. It is said that work is a series of activities that add value. They range from the raw materials to the finished products. Below are some examples of waste in a company;
- a. In manufacturing, wastes can be overproduction, shipping defective parts, having excess inventory, transporting parts, and waiting for inspection.
 - b. In an office, routing documents, bureaucracy, and signature approvals, having a lot of papers and files, excess documentation, and passing on error-filled work are regarded as waste.

The Seven (7) Deadly Wastes

Kaizen aims to eliminate all these wastes. There are about seven (7) deadly wastes;

i.

Overproduction: This develops when there is machine failure, employee absenteeism, and rejects. Other times, trying to be ahead of production can bring about tremendous waste, wasteful input of utilities and human resources, an increase in the burden of interest, consumption of raw materials before they are required, administrative and transportation costs, more space to store excess inventory, etc.

ii.

Motion: Any form of motion from personnel that does not add value to production is regarded as a waste. Workers need to avoid lifting, walking, or carrying objects that would require a great exertion of force because it is risky, complicated, and also represents activities that do not add value. For human movement to be eliminated, rearranging the workplace would be of great help.

iii.

Defects: Interrupted production, rejects, and the needed rework are great examples of waste of efforts and resources. These rejects can

require additional time to repair, increase the time spent on inspection, require workers to be on standby always to stop the machines when they are ordered to and also increases paperwork.

iv.

Waiting: This occurs when the operators are idle. For the work of an operator to be put on hold either because of limited parts, or downtime is called waiting and it results in a waste of time. Lead time, during manufacturing, begins when the company pays for the raw materials that are needed for the production of the item and ends when the company has received payment from the customers for the product given. Lead time refers to the turnover of money. When there is a shorter lead time, it merely means that resources are used aright, there is an excellent level of flexibility in meeting the needs of customers, and there is the very low amount spent on operations. The elimination of waste is a very significant opportunity for kaizen. In this category, another type of waste is time. When time is wasted, products, materials, documentation, and information are dormant and with no value added to the company.

v.

Inventory: Inventory wastes are semi-finished products, final products, and part supplies that are kept in the inventory but do not add value to the company or the production of the item; instead, they cost more. They add more to the cost of operations by simply occupying space; they require additional equipment and facilities such as forklifts, computerized conveyor systems, and storage units. Whenever these products are kept for a long time, they tend to deteriorate in quality, and when there is a change in the market value, customers desire a taste for new products, or there is an introduction of new products, the product becomes obsolete. The storage units also require additional administration and manpower for operation. They are also prone to damages through disaster or fire. To solve this problem, the introduction and initialization of the Just-In-Time production system are to occur.

vi.

Processing: There are lots of ways in which wastes can occur during processing. An example is; failure to synchronize all

processes. This can be eliminated by allowing for the redesign of assembly lines, which would reduce the utilization of input to produce the same number of output required. Examples of input are materials, utilities, and resources, while the output is the products required by the customers, services to be provided, added value, and yield. Redesigning the assembly line entails reducing the number of people on the line because the fewer the people, the fewer mistakes to be made, and it would reduce quality problems. It does not necessarily have to lead to the dismissal of other employees. They can be assigned to other sections for production. When there is an increase in productivity, there would be a reduction in cost. In the manufacturing industry, when there is a long line of production, more workers would be required, and it would also mean more work-in-process and also longer lead-time. Somewhere in this book, lead-time has already been explained. Well, when there are more workers, the possibility of making more mistakes would increase, and it would lead to an increase in quality problems. So, in summary, longer lead-time, unreliable machinery, more workers, and newly hired employees with little or no training whatsoever, would lead to an increase in the cost of production.

vii.

Transportation: Transportation in the manufacturing industry means the use of forklifts, trucks, and conveyors. It is a very important part of the production, too, but the movements of materials do not add value to the production of the items. During transportation, there is always room for damages, so, to avoid waste, any part of processing that seems distant from the mainline should be fixed into the mainline.

Reducing waste is one of the fastest ways for a company to improve its workplace operations.

3. **Standardization:** for there to be a change in the industry, certain standards are set by the management of the organization. Once they are in place, what would be left is to acquire flowers. Employees would review the standards set, and they can either correct the organization's deviation or

advise the management to either improve or change the standards.

The 5 Ms

For the management of an enterprise to improve and maintain the improvement of the workflow of employees, there are great management tools otherwise known as The 5 Ms. Keeping an eye on the 5 Ms would make the top managers of the company notice what is working and what is not in a process. The 5 Ms are as follows;

- a. **Manpower:** Managers must know their employees intimately. This would make them see if they are completing the tasks assigned the right way to them, understand whenever they have a problem with something related to work, know what skills each employee possesses, identify if there are lots of absenteeism and the reasons behind them and also know if their morale is high or not.
- b. **Machines:** Apart from the employees, the top managers should have an excellent working knowledge of every machine and tool in their respective departments. The managers must check in regularly to see if the machines are being maintained and if they are in excellent working order. They are to ensure that the items being produced are of high quality or not and find out if it is the fault of the machine or not.
- c. **Materials:** In kaizen, the flow of materials is very important. Only the materials that are needed in a particular work zone should be there. If the materials are more than is required, they should be stored away in a different location. Every work station should have a particular level for each process, and such a process should be maintained strictly.
- d. **Methods:** When a workplace has a standardized method, the managers would be able to notice if the jobs assigned to the different employees are done the right way or not. For the achievement of proper adherence to the standardized method of the department or the entire enterprise, posted diagrams and

worksheets that are show quality control and sequence control for each process can help.

- e. **Measurements:** To know if a process is running as it should or if the improvement is being made, production schedules and targets should be displayed prominently for everyone to see. It is also important for gauges to be marked clearly to show the operating ranges of the equipment.

Once these tools are integrated into the culture of the enterprise, it would aid in ensuring that kaizen creates long-lasting results in the productivity, safety, team morale, and profits of the organization.

Chapter Two

Kaizen and Innovation

Every firm indeed face competitive challenges as economies advance in the world's market place. For instance, Ferrari and Ford have competed since the time they were brought into the market place. Through competitive advantage, companies find different ways to improve their productivity and quality to satisfy the needs of their customers and also offer greater value to the market. For all this to be successful, a very important key must be used to pave the way, to open the doors to greatness and that key is innovation. How do kaizen and innovation connect?

Before going into the gory details, how can we define innovation? Innovation can be defined in so many ways, and they are as follows;

Also, innovation can be defined under four types: process innovation, organizational innovation, marketing innovation, and product innovation.

1. **Process innovation:** This is a significantly improved delivery method or production method. It simply includes specific changes in equipment, software and also skills and techniques.
2. **Organizational innovation:** This involves new organizational methods in workplace organization, external relations or business practices.
3. **Marketing innovation:** This has to do with specific, yet significant changes in the packaging or product design, product promotion, product pricing, and product placement or advertisement.
4. **Product innovation:** This is simply goods or services that has been improved significantly. It includes significant improvement in the materials or components of the product, the software of/in the product, its technical specifications and other functional characteristics of the product.

Innovation can be captured in another dimension which is the time the innovation is to take place. In this case, there are two types of innovation; **incremental and radical innovation.**

a.

The incremental innovation involves an existing service, process, product, method, and organization whose performance can be upgraded or enhanced significantly.

b.

The radical innovation is one that has an impact on the global market and the economic activity of the organization in the market place.

The more dominant form of innovation is the incremental innovation, but in some cases, the disruptive innovation began from the incremental as the innovation process includes minute incremental steps that are not innovative.

Relationship between Innovation and Kaizen

In the book “Gemba Kaizen – A commonsense approach to a continuous improvement strategy”, written by Masaki Imai, who was one of the first people to introduce the relationship between the kaizen and innovation, innovation was described as an opposing concept from Kaizen.

He saw innovation as an attention-getter, very dramatic, but on the other hand, he saw kaizen as subtle, less dramatic. He sees innovation as a major change in technological breakthroughs.

Kaizen is a set of incremental activities that are for improvement. Everyone of each activity may not induce any significant change but the accumulation of all these changes can add up to more significant transformation. Also, the accumulation of all these changes can help develop the workers’ capacity. Each worker is forced to think with the use of statistical data to solve actual problems that they might be facing and to always have a kaizen mindset in everything they do. Kaizen helps enhance the organization’s capability which would thereby enable the organization to take the right actions, experiment with the different ideas and solutions provided and adopt the new technologies and achieve innovative outputs.

Function of Innovation

The concept of innovation is captured in three basic functions. They are innovation inputs and knowledge activities, innovation outputs and outcomes, and impact.

a. Innovation Inputs And Knowledge Activities

- Equipment
- Human Capital
- Technology
- Intellectual Property Use
- Engineering and design
- Software and databases
- Managerial and organizational capital and practices

b. Innovation Outputs and Outcomes

- Improved or new products and services
- Improved or new business processes
- Newly improved organizational and managerial practices
- Intellectual property
- Patents

c. Impact

- Firm growth (increased market share or new demand due to cost advantage or enhanced quality)
- Productivity growth (improved business processes and technology)
- Economic diversification

Kaizen is said to be one of the key elements of innovation inputs, as it is a management approach in which quality can be enhanced, as well as the enhancement of human capital. It is also a paramount process for the achievement of innovation outputs, as it is a continuous activity to seek improvement in the different areas of the product quality, business process efficiency and also managerial practices.

Table 2.1: Factors That Show the Differences between Innovation and Kaizen

No	FACTORS	INNOVATION	KAIZEN
	Economy	In a good economy	Even in a slow economy

	People Involved	Few champions	A good number of people
	Main Resource	Investment of money	Personal involvement
	Improvement Size	Massive improvements	Small improvement
	Orientation	Improves results	Improves process
	Improvement Basis	Equipment technology	Conventional knowledge

How Kaizen Can Create Lasting Excellence

A kaizen philosophy of taking small steps at a time would make you attain your management goals. These small steps can help;

- a. Boost your morale
- b. Contain or reduce cost
- c. Improve the quality of products, services, and personal life
- d. Develop new services and products
- e. Increase sales
- f. Reduce the health-care expenses of individuals and enterprises.

Boost Morale: Morale can be boosted by showing appreciation, defusing or getting rid of difficult people and also encouraging employees to take the same small steps towards finding a solution to their problems. For instance; the management realizes that the morale of their employees is low. They then hire consultants that charge more money than the regular ones. Their package is for the improvement of employee satisfaction, which includes breaks for employees. It is said the morale-building is important because it is important to pay people for work done. Also, what people want is to feel appreciated for their effort put in their work. Employees also appreciate small gestures of thanks. Employees can be unhappy because of some things such as; recent layoffs, freeze on the increase of their wages and the discontinuation of incentives given to them. Most employees tend to understand that the reason for the financial difficulties of the company is not the management's fault but the economic climate at that moment. As said before, there are small steps to be taken to create lasting excellence in

the organization. Morale can be boosted by involving in “hand-holding” activities with other employees who can be done for five minutes daily. Some of these include;

- a. Asking the staff you come across about their plans for the weekend
- b. Greeting any employee that passes you in your workplace
- c. Showing appreciation when a project is turned in by the employee
- d. Remembering the names of the staffs in the organization
- e. Leading by example.

Once this is achieved, you can go about your daily business. When their employees praise bosses for being great communicators, it is not about their outgoing personalities or their oratory skills. The reason is that the leaders (bosses) take advantage of the small moments they have with their employees to connect with them. They try to remember the names of their employees to ask questions and wait for answers and also show appreciation by saying thank you.

If you have very strong morale, you would need to set the right emotional tone of your workplace through small interactions.

Low morale is one of the many global problems in organizations, but it can be strengthened in just a few minutes every day. To come up with a kaizen plan to boost the attitude of staffs, here are some questions to be asked;

- a. What can I do to increase morale that would take nothing more than one minute every day?
- b. What can I do to increase morale that would take nothing more than three minutes every day?
- c. What can I do to increase morale that would take nothing more than five minutes every day?

Contain or Reduce Cost: The Kaizen approach to control cost is one that engages employees to trash any process that does not contribute to the productivity and quality of products and services. Kaizen does not, in any way, undercut the well-being of employees in any organization.

In kaizen companies, employees are expected to remain very alert for wasted resources. Whenever employees find a process that does not add quality or increase value, the company removes it from the activities of the company. This makes the control of cost very effective and efficient. The depending on employees for the control of cost might seem unproductive but once they are invited to take little steps towards saving money for the company, you will realize that they can help control company costs. However, this does not give the management the right to place the responsibility of reducing cost on the shoulders of the employees and leave them to it. This would first of all, create a kind of fear that would not allow change to happen. What is to be done is to shape the approach of the employees to their daily jobs in the enterprise, so they would be able to spot opportunities that would allow them to save. Trust me, they would be fully engaged. As the boss, you should be able to help them bypass their fear of making suggestions that are invalid and also help them bypass their fear of you.

Allow the employees to think outside the box.

How can cost be controlled?

Steps to Controlling Cost

- a. **Offer Little or No Rewards:** In Japan, employee suggestion plans tend to be consistently successful but in the United States, the reverse is the case. According to research, the United States offers cash rewards that are proportional to the amount of money saved by the suggestion made in the company. This motivates the employees to save more money because with that, they would get more reward money in return. Unlike Japan, there are either modest cash rewards or no rewards at all. Psychological studies have proven that human motivations are illuminating. Motivation is of two (2) types: **extrinsic and intrinsic**. The intrinsic motivation comes from within. They are the desire to contribute, to engage in meaningful tasks and also to take pride in their jobs. People want to be challenged at what they do and to be proud of what they do. They have an inner drive to do meaningful things.

The extrinsic moves are found outside an individual. Some of the extrinsic motivations are drivers like money and titles. The extrinsic motivations pay people to stick with stressful work. The key to controlling cost is to make the rewards as small as possible. When there are cutbacks, one can still maintain a kaizen outlook by ensuring the cuts are calm and thoughtful.

- b. **Ask Small Questions:** I have noticed that though some managers try to ensure their employees provide continual improvement, they are very aggressive in their tactics and this creates setbacks. Using this approach would not let things be done as efficiently and effectively as you want it to; instead, it would make the employee feel embarrassed and uncomfortable in your presence. Because of this, they tend to give vague answers to the questions asked by their managers. An example of a big question that can give them a paralyzing effect is “what can be done to save the company millions of money?” This kind of question can set the brain off and even mute the employee. Try a softer approach, like, “can you think of a way we can save money?” You can also try to encourage the employee to think of the things that do not seem right to them at work. There are lots of possibilities for kaizen change.
- c. **Connect Savings to The Mission of the Company:** Some companies have notice boards that do not attract the attention of employees. They should be taken down. This implies that the suggestions made are different from the real work of the employees. Small questions lead to suggestions for small improvements in the company. Treasure them.
- d. **Be Open to Suggestions:** Most employees are afraid to bring up ideas or suggestions because they are afraid of looking foolish or their suggestions to be seen as stupid. They also are afraid of bringing up suggestions because they do not want to make you angry, so, they keep any cost-saving suggestion they have in their minds unless there is an active insistence on their input. When kaizen is adopted, assignments can be given to employees to find out cost cuts. This does not mean you are not in charge. Convey authority and be responsible for evaluating already-filtered ideas. Set up procedures for

managing suggestions. While filtering the suggestions given, take every one of them seriously. Try not to confuse stupidity with simplicity and vice versa. Sometimes the most naïve suggestion may hold the key of genius. Do not forget to thank the employee whose suggestion brought about the change the company needed. Also, take the opportunity to retrain the employee. Remember, kaizen offers employees and the entire management opportunities to learn.

Improve Quality of Products, Services and Personal Life: Try to improve your ability to locate little mistakes. These mistakes may seem pretty annoying at first but if they are not addressed early, they can develop into quality-control problems. Kaizen requires that we find out and address mistakes while they are still little. It might be tempting to overlook these problems until they become catastrophes. Whenever a company puts on heroic performances daily, they tend to ignore little mistakes. Whenever a business succeeds, it tends to worship the factors that brought about such fortune, which are the people and the institutional procedures. When something is not functioning right in such business, it is hard to speak up; glossing over the mistakes; and with this, they would lose chances to focus, and remain competitive. Whenever you ask your employees if there are problems that need to be known, and they reply that there is none, mark their confidence as red flags.

The fact that human beings will make mistakes is a kaizen presumption. Have it in mind that in an organization, every individual is responsible. Allow the little mistakes that have been noticed to change your criteria for either failure or success. Improve your ability to locate the little mistakes, announce that you expect everyone in the company to see them and to proffer solutions to them.

Kaizen insists that everyone in the company is highly responsible for quality and productivity to the same degree. It is also the responsibility of the management to make it easy for suggestions and ideas to flow from the lower managers to the top managers and towards those who are in need of them. These ideas and suggestions should clear pathways from bottom to top.

Companies can as well, create mistake policies. Below are some steps that can lead to the development of a mistake policy in a company:

- a. Define the mistakes that the enterprise would want to avoid at every cost necessary.
- b. Share the mistakes with your team and try to figure out what the early signs look like.
- c. Ask your staff for mistakes they have observed and make sure they do not overlook anyone.
- d. Decide the safe what for employees to talk about the errors they seem to have encountered.

Develop New Services and Products: There is a common misconception that the small kaizen steps we take tend to yield small results, but these steps we take lead to great inventions that change the world over time. People tend to believe that the only time questions are asked if one is curious. Asking questions is an important skill and not curiosity; there is a difference. Asking questions brings about one's creativity. Creativity is not something that pops up whenever it feels like. It is an activity; attention to the insignificant moments of life. Creativity leads to successful services, products and changes. Though creativity can be practiced at any time, there is a moment when it tends to be fruitful for the production of ideas. Some of those moments are;

- a. **Wastefulness:** Whenever something is out of place, time is wasted or something gets broken, temper is lost and this makes us either reconfigure your schedule or replace the item that was broken. Doing this, you can act with curiosity.
- b. **Embarrassment:** Sometimes embarrassment is caused because there is a space between what they did and what they ought to have done. Of course, this feeling is a very uncomfortable one, so it is instinctive to avoid it by simply trying to hide the mistake from people who might not have heard about it yet. Some people might own up to their mistakes and even laugh at the fact that they committed them and will move on as quickly as they can. In this state, creativity can come in the form of trying to cover up the mistake.

c. **Boredom**

- d. **Silly problems:** Sometimes, we long to be significant but this yearning can become less attractive and be seen as self-importance. The dismissal of people's problems as silly is seen as self-importance.

With this, you will realize that creativity does not require any special talent of the sort. It only requires attention. To be focused and inquisitive, you must practice mental discipline. The kaizen steps can help cultivate that attentiveness and also grow the curiosity you need.

Another kaizen strategy for the increase of curiosity is to attend to the mistakes made. There is one paradox for mistakes which is that innovation requires a trial and error learning and also making mistakes and nobody likes making mistakes; so the best way to resolve this paradox is to create small pilot experiments and also encourage mistakes that allow for learning at the same time, reducing cost.

As one enjoys the benefits of creativity, they would realize that such creativity was born from patience. This patience brings about long-lasting results.

Increase Sales: No matter how sales are defined, it is scary. Imagine this: sales are defined as an act of persuasion that allows the encouragement of other people to exchange money for goods and services to give out their support to ideas. The work of salespeople is to offer themselves and the products and services they are required to exchange to the world; but sometimes, the world does not seem kind to them. It responds with rudeness and rejection, but the salespeople still have to keep pushing till their services and whatever thing they are to exchange is done. For some people, the act of preparing a sales call is terrifying for them, but for others, there is kaizen. A lot of salespeople do not enjoy that fear that comes to their minds and the high rate makes this fact of turnover in the sales department of the organization. Kaizen is said to be an ideal tool when it comes to training and retaining sales personnel. Kaizen is also a perfect tool for frightening situations. A lot of us are programmed to shut down mentally whenever we are found in scary situations. Now, this does not make anyone a poor salesperson. It is simply a response to physiology. For instance, when faced

with challenges that seem serious, the amygdala in the brain senses a kind of threat to our survival.

It is true that when choosing salespeople, you should choose those whose brains naturally relish sales excitement, but these set of people tend to burn out easily and quickly. Training a salesperson can be very expensive and dropouts are inefficient and very costly too. The question to be asked is, “Why not teach every salesperson a strategy for fear management?” The strategy for fear management is a kaizen method of moving past the fear, taking one step at a time. Instead of asking your employees to change the way they act, encourage them to make small changes in the way they reason. Some kaizen steps to guide them along the way include:

- a. Changing the way they see themselves
- b. Changing the way they talk about themselves
- c. Changing the way they imagine sales
- d. Connecting their sales to a greater mission of the organization

Taking small steps towards the main goal will keep your mind at peace and push you to keep moving. Sometimes, an activity can seem difficult or frightening, or you feel emotionally charged whenever it seems like taking these small steps are proving difficult. What can be done in this case? This is where mind sculpting comes in. Mind-sculpting is one of the many simple kaizen tools. It is a way of melting the resistance of the mind. Mind sculpting was formed from a psychological technique known as guided imagery. The goal was to help patients improve a particular physical skill without actually performing the act. For example, if a patient wants to improve his or her vocal ability, he or she would close their eyes and take in deep breathes. When in a relaxed state, the psychologist in charge would then invite the person to imagine being in a dark movie theatre, sitting very comfortably in front of a screen that is blank. The patient at that moment is supposed to see a movie on the screen delivering a presentation.

At a time, the guided imagery process was very popular, but it became lukewarm as time went by. It was successful but not as most people hoped for. The Positron Emission Tomography (PET) scans backed up

the general impression which then showed that guided imagery engaged only one part of the brain, which is the visual cortex.

Anyway, back to mind sculpture...

Mind sculpture helps build on what other psychologists have learned from the guided imagery process. It is an imagined, yet total sensory experience. This time, instead of pretending to be in a movie theatre, you can imagine you are performing a particular activity. You would still be making use of the virtual cortex.

This mind sculpturing has been used by athletes to practice whenever injuries sideline them. Whenever they come back to the field, you would see that their performance is stronger than ever. Musicians also make use of the mind sculpture.

How can mind sculpturing be used?

a.

First, choose a skill you would want to learn or improve.

b.

You can also choose a situation in which you like to feel more comfortable.

c.

Decide on the amount of time you would want to devote to the sculpturing of the mind daily.

d.

Sit in a very quiet place and take deep breathes slowly.

e.

Without moving, imagine yourself immersed in a situation. For example; if you seem to be responding to your anxiety unproductively either by talking too fast, or withdrawing emotionally, place yourself, mentally, in a tense sales situation. Imagine yourself responding more effectively than usual. Imagine every part of your body is releasing its tension. Do you feel connected with the other people who are with you? Now, imagine yourself asking the right questions, exploring the needs of your customers, and trying to understand their businesses showing

genuine interest. Can you hear the confidence in your voice and the clarity of your words?

f.

Practice this mind sculpting exercises daily for about 60 seconds or less. Once the time spent daily seems effortless and automated or even fun, try to elongate the time spent. The speed at which you increase your time spent doing the mind sculpting exercise is determined by how much you love the exercise. Unless the exercise is effortless, do not increase your time. Once you begin to start making excuses for not performing the mind-sculpting exercise daily, you would realize that too much has been asked of yourself. So, cut your time back. Avoid overreaching. Assure yourself that a step-by-step kaizen approach would change your behaviors for as long as it can with no urgency attached.

g.

Increase the time spent on mind sculpting continuously till you have achieved one of two possible results. The first result is to lay the foundation for change. You would begin to feel comfortable with the exercise that you would feel ready to try out the activity even if you want to take it one small step at a time. You might even want to practice sales with someone, preferably a friend. The second possibility is that your brain would begin to get the idea and also create new patterns at its own time with little or no additional conscious effort on your part.

With all these, you would know when the mind sculpting has worked especially when you find yourself in a tough sales situation and you see yourself using words effortlessly as you have practiced. Mastering sales which at first, felt awkward to you would become very automatic and what seems unnatural to you would become natural.

Mind sculpture for new habits can be very effective in a few minutes of every day or maybe less. The reason is that the brain uses repetition to decide the skills to store in the neural pathways and cells. This is the reason why commercials are shown several times a day because the advertiser knows that it is the only way to make impressions on your brain.

As we have explored the ways to increase your sales power by simply looking at sales and thinking about it differently, once the connection with a customer has been made, other small steps can aid in the improvement of sales. They are as follows:

a.

Sales are to occur, one customer at a time, regardless of how much money is spent on advertisement. According to the CEO of Starbucks, Howard Schultz, the only way one can succeed and at the same time, sustain growth and innovation is all linked to the basic elements of a small cup of coffee, one barista and one customer at a time. With each interaction, try selling your customers on your business enterprise. Also, be especially alert for little attention or acts of helpfulness that can cement your relationship with your customers.

b.

Ensure that the first and last contact your company has with a customer is very positive ones.

c.

When business messes up and you are sure that you have in one way or another irritated your customers, a great opportunity to increase the loyalty of customers and sales would occur.

d.

After the exchange of products and services to customers, follow through on the relationship.

As you begin to think about these steps on how to improve interaction with your customers, do not forget to rely on your inner knowledge.

Reduce The Health-Care Expenses of Individuals And Enterprises:

Some years ago, who would have thought that managers are to feel responsible for the healthy habits of their employees? But as health care has become a significant cost for companies, it is bound to happen. Look at it this way, if the health of staff members is stable, the cost would be reduced and the organization would save money. Some organizations encourage their employees to do better through incentives. In relation to health, they offer money to anyone who can demonstrate some improved health behavior. Another way is to apply social pressure with departments trying

to compete with each other on who would lose the most weight. When there are external motivators, the employees tend to relax and go back to the way they were before once the program is over and this pressure or reward is removed.

With this, employees observe that any attempt to change their health behaviors would encounter serious health resistance. As a manager, do not be too hard on your employees. Eating right, losing weight and also being involved in an exercise program are seen as the toughest changes a person can make in life. You might be one who possesses strong self-discipline when it comes to your business life but for your healthy life, you are like a baby forced to take medication. Why is it so that health changes seem very hard for people? Some reasons include;

- a. They are too busy
- b. They are very tired
- c. They do not have enough support
- d. They are not motivated enough
- e. Their partners tend to sabotage their efforts
- f. The bad behaviors have been etched into their psyches and it is deeply comforting.

These obstacles are very important to change but the major reason for it all is fear. One of the kaizen premises is that change is frightening. Even if you believe that such a change would bring positivity to your life, the reaction to fear would make it difficult to stop your bad eating habits or even begin an exercise program. This is where kaizen is proven to be shockingly and remarkably useful. By taking these small steps, people can move slowly but steadily toward change that there is no arousal of fear.

Employees cannot be encouraged to take these kaizen steps until you are convinced that kaizen for health is very effective. This would be well detailed as we proceed. Once you have been convinced of the power of kaizen for health, you can then begin to spread the word to every individual in the organization. Kaizen can also help in the management of stress.

Chapter Three

Kaizen and the Capabilities of the Organization

Is innovation less likely to occur in most developing countries compared to more advanced economies? One particular theory is that when firms lack capabilities, innovation is less likely to occur. The level of firms' capabilities, which are organizational and managerial practices make innovation work while the level of government capabilities are related to the formulation of policies that are effective and can support the firm's level of innovation.

The capabilities of an organization are defined as the working practices and the knowledge which are used by firms in production and the development of new products. The capabilities of any organization manifest in productivity and quality.

In organizations that lack capabilities, if an entrepreneur comes up with a brilliant innovative idea, it is not entirely possible for the idea to be transformed into a product. For this particular product to be installed in the market, the continuous effort of the Plan-Do-Check-Act (PDCA) cycle is needed for the trying out of the different prototypes and then modifying them to satisfy the needs of the market. Every step, every process, every activity is known as the Kaizen activity and it enhances the capability of the organization. In summary, kaizen is an approach for the enhancement of the capabilities of organizations.

Fundamentals of Policy and System Development for the dissemination of Kaizen

In a lot of countries around the world, Kaizen has been disseminated under the leadership of the government, though private organizations took the initiatives of the quality and productivity movement and the Total Quality Control (TQC). Kaizen was implemented by Japanese companies without help and also the expansion of their businesses overseas. They also hired foreign consultants when the need arose. Considering Africa's current industrial level, which is increasing by the day, not many companies and organizations can undertake these measures. Also, low management capabilities with little or no recognition of the importance of improvement prevent the private sector from taking the Kaizen dissemination initiative.

In many countries in the world, kaizen activities are carried out under the assistance of kaizen promotion firms that are within the framework of the public support system.

The government works on the improvement of quality and productivity while adding support measures that target different countries and their organizations as part of their industrial policy. According to research, the manufacturing companies are not actually the ones that need productivity and quality improvement. It is also required in the service industry as well as in the public sector. Do you know that the need for productivity and quality improvement is also needed in the lives of the general public? This gives reason to why it is important for the spread of kaizen thereby promoting the changes in the attitude of people towards productivity and quality as a movement worldwide. An example is the government-led dissemination and promotion of kaizen in Ethiopia and Singapore which resulted in highly successful results.

Activities Necessary for the Promotion of Kaizen

1. Policy and Finance Support By Relevant Government Agencies

For nationwide dissemination of kaizen, the first step is to involve the selection of some organizations that are responsible for the development of mechanisms and systems that support the activities of kaizen, secure and train the human resources, otherwise referred to as kaizen trainers. To begin these steps, the government is expected to implement policies to support the promotion of kaizen and also to support operations and activities of the promotion organizations of kaizen financially. Through understanding, cooperation, and the demonstration of strong leadership of government officials towards the dissemination of kaizen, it can be realized. With the support of the government, the promotion organizations of kaizen can help develop plans and strategies for the dissemination of kaizen in order to secure the government's approval. The plans and strategies must be in line with the framework of the national development plan of the country. With this, the kaizen can effectively spread throughout the country. During the development of the framework of the dissemination system of kaizen, the promotion organization of kaizen is expected to establish effective yet

detailed action plans with the national development plan of the country and its industrial policies.

2. Kaizen Promotion Organizations' Dissemination Activities

The activities of dissemination are to be carried out by every individual in the company for the improvement of productivity and quality and also to enhance the organizations' capabilities and its industrial competitiveness. The effectiveness of the activities of kaizen is to be recognized and implemented continuously in order to establish the culture of Kaizen. The creation of the kaizen culture through the dissemination and increase of awareness is important for the kaizen dissemination as a national movement in the country. It is expected for the promotion organizations of kaizen to start with the communication of information and the increase of awareness on its concept and significance to the world through the use of equipment such as radio, bulletins, television, government-organized events, the Internet and also Social Networking Service (SNS).

These promotion organizations should be able to organize conferences and seminars for other organizations and companies so as to offer training and consulting services when it is needed. In the introductory phase, it is important to raise awareness by increasing opportunities for companies and people in order to acquire more knowledge of kaizen. For future marketing purposes, it is necessary to try to offer services at a low cost or free of charge. It is an effective way of spreading the word and getting people to listen. Another way of spreading the news and increasing awareness is to organize kaizen conferences to commend Kaizen trainers and companies that have been performing excellently.

Table 3.1: Some Kaizen Promotion Organizations and Their Structures in Some Countries

No	Countries	Kaizen Promotion Organizations	Ministry	Roles
	Kenya	<ul style="list-style-type: none"> a. National Productivity and Competitiveness Centre (NPCC) b. Kenya Institute of Business Training (KIBT) 	<ul style="list-style-type: none"> a. Ministry of East African Community, Labor and Social Protection (MEACLS P) b. Ministry of Industry, Trade, and Cooperatives (MITC) 	<ul style="list-style-type: none"> a. NPCC, an agency under MEACLS P administers productivity improvement programs across all sectors. b. KIBT provides BDS for MSMEs as their beneficiaries.
	Cameroon	Small and Medium-sized Enterprises Promotion Agency (APME)	Ministry of Small and Medium-sized Enterprises, Social Economy and Handicrafts (MINPMEESA)	Offering BDS to small and medium-sized enterprises (MSMEs) in every sector.
	Japan	<ul style="list-style-type: none"> a. Union of Japanese Scientists and Engineers (JUSE) b. Japan Productivity Center (JPC) c. Japan Institute of Plant Maintenance (JIPM) 		Each of the financially independent organizations listed to the left-hand side works on dissemination and kaizen promotion.
	Zambia	Kaizen Institute of Zambia (KIZ)	Ministry of Commerce, trade, and Industry (MCTI)	<ul style="list-style-type: none"> a. The beneficiaries are organizations,

				<p>small, medium-sized and large.</p> <p>b. The country's national plan seeks quality improvement in every sector.</p>
	Singapore	<p>a. Singapore Productivity Association (SPA)</p> <p>b. Singapore Innovation and Productivity Institute Pte. Ltd. (SiPi)</p> <p>c. Singapore Productivity Centre (SPC)</p> <p>d. SPRING Singapore (Standards, Productivity and Innovation Board)</p>	Ministry of Trade and Industry (MTI)	<p>a. The current government aims to internationalize SMEs and also promote shifts towards a higher value-added sub-sector.</p> <p>b. The productivity Movement started in 1980. Since that time, the country has been promoting human resources development for the government-led industry.</p> <p>c. The government is actively offering subsidies for different businesses.</p>
	Tunisia	<p>a. Centre Technique de l'Emballage et du Conditionnement (PACKTEC)</p>	Ministere de l'Industrie et du Commerce	<p>a. The beneficiaries are mainly medium and large-sized</p>

		<ul style="list-style-type: none"> b. Unite de Gestion du Programme National de Promotion de la Qualite en Tunisie (UGPQ) c. Centre Technique de la Chimie (CTC) d. Centre Technique du textile (CETTEX) e. Centre Technique des Industries Mecaniques et Electriques (CETIME) 		<p>manufacturing enterprises.</p> <ul style="list-style-type: none"> b. MIC's policy s to aid medium and large-sized manufacturing businesses enhances their quality and also competitiveness in order to expand the European market.
	Tanzania	<ul style="list-style-type: none"> a. Small Industries Development Organization (SIDO) b. Department of Industrial Development (DID) c. Tanzania kaizen Unit (TKU) d. College of Business Education (CBE) 	Ministry of Industry, Trade, and Investment (MITI)	<ul style="list-style-type: none"> a. DID support the manufacturing industry, small, medium-sized and large businesses. b. SIDO supports MSMEs.
	Ethiopia	<ul style="list-style-type: none"> a. TVET Institutes b. Ethiopia kaizen Institute (EKI) c. Kaizen Regional Institutes 	<ul style="list-style-type: none"> a. Ministry of Education Regional Government (MERG) b. Ministry of Public Service and Human 	<ul style="list-style-type: none"> a. EKI supports both medium and large-sized businesses. b. It aims to disseminate and spread kaizen into

			Resource Developme nt (MPSHRD)	every business sector.
	Costa Rica	National technical University-Technical Instructor and Personnel Training center (UTN- CECAPRO)		<p>a. The technical assistance are conducted for the Dominican Republic and El Salvador.</p> <p>b. They provide paid training and consulting services when necessary.</p>
	Thailand	Thailand Productivity Institute (TPI)	Ministry of Industry (MOI)	TPI is an organization that helps oversee the productivity improvement movement in the country, thereby providing programs and also consulting for other organizations including the private enterprises.

3. Training Kaizen Trainers

While trying to disseminate kaizen through the use of publicity tools and seminars in order to stimulate demand for kaizen, it is important to train Kaizen trainers who are to provide services that are kaizen-related to meet the created demands of the company. The kaizen trainers can be employees of the promotion organizations or even private consultants who have already completed their training which was conducted by kaizen promotion organizations. It is important and expected of them to acquire theoretical knowledge through Classroom Training and also obtain practical skills through In-Company Training. Such knowledge can be acquired in vocational schools, higher education institutions and other institutions of learning. Some practical methods of kaizen and techniques can be acquired by practically applying them through In-Company Training; so, prospective trainers must gain as much practical experience as possible to gain practical skills that would allow them to deal with issues related to kaizen. The level of kaizen techniques that are required in business areas in a country differs depending on the level of industrial development of the country. For this particular reason, it is advised that they must determine the scope of training to develop and enhance the contents which come in form of manuals, textbooks, curriculums, guidelines, etc., based on the needs of the enterprises. Kaizen trainers are divided into two; those who belong to the private sector and those who belong to public agencies. As they are of different types, it is necessary that kaizen promoting countries provide strategic training for them and also to document the roles in which they are expected to play when providing individuals in companies their consulting services.

4. Consulting Services to Support Businesses

Once the creation of a level of kaizen demands through activities created for awareness and dissemination, the trainers are to provide consulting services for companies and other organizations in the selected countries. The activities are to be conducted through concerted team efforts among every individual in the company and the kaizen trainers and not via the efforts of the trainers alone. For these activities to be implemented effectively and to bury its roots in the organization, the trainers should be

able to conduct training on the various levels of management. While the training is in progress, it is vital to allow employees to develop mindsets to think and also conduct activities of their own and also make the management support the activities.

The promotion organizations of kaizen are to be able to organize a series of events in order to share the outcome of kaizen to the public. For the support of businesses, it is important to make use of some mechanisms so as to encourage voluntary promotion activities.

5. Collection, Analysis, Review, And Release Of Data

Once kaizen activities have been implemented in various organizations, the outcome is to be collected, analyzed, reviewed thoroughly in order to see and understand the impact of the activities on businesses in each company kaizen was implemented before releasing the data. Sorting through the kaizen data by business size and the industry provides the private sector, the general public and the government with useful information on the contribution the dissemination has on national welfare and the economic growth of the country. The data generated can help encourage the companies to sustain and maintain continuous kaizen activities and top use that opportunity to motivate companies that are striving to meet them.

It is expected that the data generated from the kaizen activities should be quantitative for an easier understanding of the degree of impacts. This can also be achieved if the promotional organizations of kaizen have a mechanism and the capability to collect and accumulate the right yet reliable data. In addition to this, it is important to study and compile qualitative outcomes too. Some of these qualitative outcomes are the employee's attitude, mindset and mentality with the customer satisfaction levels as a bonus. Every kaizen activity is expected to increase the dissemination of kaizen and also improve the productivity and quality of industries and organizations, thereby enhancing the industry in the country and also their competitiveness. It is somewhat difficult to measure the impact the activities of kaizen have made directly for the growth and enhancement of the competitiveness of industries and the reduction in the unemployment rate and the Gross Domestic Product (GDP) growth. The promotion organizations of kaizen should aid in the implementation of

kaizen and its accumulated data in other companies in order to present visible results. Kaizen activities allow for the enhancement of the capacity of industries, help build credibility and achieve social recognition. Such activities can be conducted intensively and more extensively in every society when it is done with the help of a wide range of stakeholders which includes trade associations, government-affiliated organizations, financial institutions, educational institutions and private institutions also. With this, it is advisable to build strategic partnerships with stakeholders.

I believe that with the understanding of how kaizen can be disseminated, we would see its importance and use it wisely. Before the government can be allowed to put in their efforts continuously, it is very important for them to be ready to support kaizen activities and to show how committed they are. There are things that are to be considered in order for the government to assist the promotion organizations. They are;

- a. How can kaizen promotion organizations be selected?
- b. Budgetary measures
- c. Strong leadership of high-ranking government officials

How to Select Kaizen Promotion Organizations

This is the first area in which the government can demonstrate its commitment. New organizations established specifically for kaizen can be used as a kaizen promotion organization, or better still, new tasks can be assigned by the government (the dissemination of kaizen) to already existing support organizations that provide BDS. A kaizen promotion organization can even be a technical assistance organization. Decisions that are to be made on any kaizen promotion organization should be according to the development agenda and the policies of the particular country. There are certain items on which kaizen promotion organizations should be considered. They are as follows;

- i. Careful selection of agencies that would oversee the selected kaizen promotion organizations.
- ii. Consistency with existing support organizations' policies and industrial policies.
- iii. Mission, vision, plan, and strategy of the organizations.
- iv. The legal status of the organizations.

- v. The structure of the organizations which include the staffs, offices, address, financial resources, etc.
- vi. The systems that would aid in the monitoring of outcomes and activities.
- vii. The objectives and roles of the organizations.
- viii. Partnership with the private sector and other stakeholders which include research institutes, industry associations, educational institutions, etc.
- ix. The operations of the organizations which would determine whether they are to be made temporary organizations or permanent ones.

Budgetary Measures

The securing of the budget for operations to begin is a very important issue. Due to less funding for the dissemination of kaizen in developing countries, the operations of the kaizen promotion organizations have been disrupted. When kaizen promotion organizations are yet to produce tangible results, it is difficult to secure a sufficient budget. Sometimes, when a small budget is secured, most, if not all of it goes into personnel costs, administrative expenses and the rest would not be enough to fit the kaizen promotion activities bill. Because of this, the fees they charge from seminars and consulting services are in view of their public nature. This sometimes prevents kaizen promotion organizations from being financially independent, able to obtain funds themselves.

As this has become a problem, it is expected that the government implement systems which would enable kaizen promotion organizations implement their activities and produce perfect outcomes and also monitor their impact on the economy of the nation and the industries too; some of which include human resources development, creation of employment opportunities for the people, economic effect and also the enhancement of industrial competitiveness.

With these outcomes, they should act as a boost for the government to allocate the right amount of money to support the promotion organizations and their activities in the next budget cycle. If it seems less possible for the government to secure a sufficient budget for the promotion of kaizen activities, another way of raising funds can be by asking donors to bear the

expenses for kaizen activities or charging those who would want to be beneficiaries of the seminars or their consulting services or even the companies in order for them to pay the subsidies of the government. Though this is a good idea, it is not the only way the kaizen promotion organizations can be financially supported by the government. They can be indirectly supported by the government by establishing the right legal systems and policies and also improving access to financial resources.

Strong Leadership of High-Ranking Government Officials

Knowing how to select kaizen promotion organizations and taking budgetary measure are great ways for the government to show commitment but above all, having strong leadership from government officials held in high esteem, some of which include the prime ministers and other ministers in power, is a best way of letting the public give listening ears to the gospel of kaizen and also spread the word throughout the nation. The high-ranking government officials can also try to incorporate kaizen into the policies of the nation. It is said that without the implementation of kaizen into the nations' code of conduct or whatever name they give to it, the people of that particular country would not take it seriously. It might even be seen as a fraudulent act; also, the government work to ensure it is brought down but once they become educated about it for their own growth and development, they would try to imbibe it in their legal systems.

Let us use Singapore as a case study;

In 1980, after the late Prime Minister, Lee Kuan Yew successfully introduced kaizen to the country; they launched the "Learn from Japan Campaign" a year later as they saw Japan as their role model based on the recognition that they achieved rapid economic development immediately after the war. As part of a program, they decided to disseminate kaizen activities throughout the country. There were some major factors that enabled the introduction and successful modernization of kaizen. The policies of the country which consistently supported the move while Prime Minister Lee was still in power were one of the major factors.

More detailed information;

The dissemination of kaizen in Singapore began in 1981. It began when the National Productivity Board (NPB) which was established under the

Economic Development Board decided to intensify their efforts for the productivity movement which incorporated the Japanese productivity improvement methods and labor management. The productivity movement was initiated by the late Prime Minister, Lee Kuan Yew. He announced the policy which was to be for the development of a skilled workforce for industries. He made it clear that it would be part of a measure for the promotion of the economic growth of the country and they would do so by following the productivity improvement movement in Japan which had already achieved remarkable growth.

In 1893, the Productivity Development Project was launched and over a period of seven years, it was extended. Among the people/organizations that completed the project training, about 28 of them served as Kaizen trainers for the provision of assistance for smaller companies. After the project was completed, they just did not put a stop to it; instead, the country continued to serve as a consultant for a fee. About half of the fees they charged were covered by the subsidies of the government and this made many companies use the service. By 1993, the productivity movement had attained its peak and it was at that time, the Productivity Standard Board (PSB) was established. They began to provide different forms of BDS and kaizen-related services.

Soon, PSB grew into a very large organization, having about 1,500 staff in order to provide a wider range of BDS. In 2002, the government then reorganized it into different organizations which included PSB Corporations serving as a provider of services and the policy development body, Standards, Productivity, and Innovation Board (SPRING Singapore). The Singapore government then shifted its priority from the promotion of innovation from the improvement of productivity. The promotion of innovation was in accordance with the changes made in the industrial structure of the country and also the economic development level, even though the productivity of most SMEs still needs improvement.

After the reorganization has been successfully implemented, SPRING remained as a national agency while there was a separation in the organizations that provide kaizen services. They were private as PSB Corporations. This made PSB Corporations to begin to provide their own version of kaizen. They customized what has already been learned through

the projects done and provided a combination of different BDS services in the country. They called it the Singaporean Kaizen.

Later on, PSB Corporations were dissolved, leaving the country with a reformed system with services being provided through the cooperation of SPRING and other organizations willing to partner with them. As private entities, PSB Corporations decided to respond to the needs of companies and then involved private consultants in the process. This was done by developing and providing different kaizen services. This is one of the reasons why SPRING was able to collaborate with other organizations and to date, there are wider ranges of SME support services in Singapore.

Moving on;

Another major factor is public dialogues which included government officials. In Ethiopia, this dialogue was actualized by late Prime Minister Meles Zenawi and the Prime Minister after him, Prime Minister Hailemariam Desalegn. They had a very strong interest in kaizen and this allowed for the incorporation of the dissemination of kaizen into the development plans of the nation.

More details on the start-up of Kaizen Promotion Organizations in Ethiopia;

In 2008, the Prime Minister of Ethiopia, at that time, participated in the Fourth Tokyo International Conference on African Development (TICAD IV) which was in Yokohama. After that, he requested assistance from the Japanese government for the industrial development of the country at the Africa Task Force Meeting of the Policy Dialogue Initiative in Addis Ababa. Japan responded a year later by starting two projects, the Japan-Ethiopia industrial policy dialogue and technical cooperation for developing planning in the country.

The start of these projects brought about different discussions on the establishment of a unit in Ethiopia which was under the jurisdiction of the Prime Minister of Ethiopia at the time, Meles Zenawi. Ethiopia used experiences of SPRING Singapore as a case study, which was a successor of the then introduced NPB, an organization that had been supported by Japan to help improve the productivity and quality of the country's products through kaizen from 1981. The Ethiopians were very inspired by the commitment of the Singaporean government, which was a national

movement that had emphasized the importance of instilling the kaizen philosophy into the mind of their people and the Ethiopians made rapid but steady efforts to inculcate and disseminate kaizen as a movement in the nation. With great determination and strategy of the Director-General of the EKI, Mr. Getahun Tadesse, there was a great contribution to the successful dissemination of kaizen in Ethiopia. He focused greatly on some activities for kaizen dissemination. The activities are as follows;

- a. Japanese experts worked on about 30 companies to help ingrain the activities of kaizen and to also train other members of the kaizen unit through ICT and CRT. The outcome of this training was then reported through an extensive campaign by mass media.
- b. About 10 people were hired from technical centers under the Ministry of Industry for the establishment of the kaizen Unit.
- c. The development and establishment of the vision for the dissemination of Kaizen in the country as the nation's policy.
- d. As a part of the technical cooperation project, the 10 people selected were trained by Japanese experts to acquire knowledge and understand the methods of kaizen, and also to form core members for the dissemination of kaizen.

There was focus on the building of institutional foundations, the raising of awareness about kaizen campaigns, and also the development of the dissemination plans from the beginning which led to the winning of the government leaders' commitment and the promotion of kaizen. This promotion also led to the enablement of more institutional development and expansion of the kaizen unit. The selected members of the unit who were trained by experts acquired not only the methods of kaizen but they implemented the kaizen promotion activities, established the dissemination of networks which involve their technical centers (home organizations), developed dissemination plans, trained pilot enterprises that were in collaboration with technical centers, and public relations activities. Efforts were combined together by every individual in order to establish the EKI, and those efforts also contributed to the strengthening of the EKI organization and the present successful outcomes of the kaizen dissemination.

Though these examples tell of how the government officials (Prime Ministers) embraced and took the initiative of kaizen to support it, the Prime Ministers in other countries may not share the same minds as they did as they might not be able to select kaizen on their own initiative or adopt it in the policy of their respective nations. How can they go about it? The primary key here is how to approach other government officials for support in the kaizen programmer. Once this is done, it is important to also establish the right mechanisms for the analysis and evaluation of the outcome of the activities of kaizen both qualitatively and quantitatively and also to report whatever findings there are to the high-ranking government officials when necessary. The expression of the impact of kaizen in monetary values can help the individuals in power to be able to explain to the public the importance and significance of incorporating and implementing kaizen into the policy of the nation, thereby promoting it as a government-led support program for businesses. Also, by gaining the support and understanding of the public, they can help promote kaizen with greater leadership and confidence.

Chapter Four

The dissemination of Kaizen

Kaizen Dissemination Stages

The kaizen dissemination stages are divided into three; the introduction stage, the dissemination, and the full-fledged stage. There are certain points to note when considering these stages;

First, the introduction stage is the trial stage having very limited resources. During the introduction stage, it is possible that the activities of kaizen are conducted on a pilot basis, thereby making the right use of the limited resources there is. For kaizen to be spread all over, the production of tangible results every step of the way, based on an already set plan is important instead of being aggressive and extensive when trying to do everything at once. The dissemination stage has to do with the dissemination of kaizen through the right human resource, systems, organization and policies. The full-fledged stage is where the utilization of the resources of the private sector, the securing of financial independence as a program occurs.

During the first two stages, the introduction and dissemination stage, the kaizen promotion organizations direct the dissemination of kaizen. Once the foundation of dissemination has been developed during the introduction and dissemination stage, the full-fledged stage which is for the dissemination of kaizen comes next. During this stage, the collaboration with the nation's private sector becomes very much required.

The dissemination of kaizen by the private sector is not entirely easy. In Africa, not every local company can afford the consulting fees for kaizen. The promotion of kaizen through the activities of private organizations becomes difficult in countries where the industries are not fully developed.

As it is desirable, the government should try and encourage the private sector of the nation to be very much involved in all their effort in the dissemination of kaizen so as to create demand for any kaizen-related activities. There is the need to establish a system for the outsourcing of some of the operations of the public sector to the private sector and also

develop the dissemination structure of kaizen that makes use of the private-sector capabilities.

Characteristics of the Mobilization of the Private Sector for the Dissemination of Kaizen

i.

There are different types of technical services that cannot be offered by public organizations but can be provided by private organizations.

ii.

Private organizations under a few legal restrictions tend to use their discretion when deciding on the fee to be collected for consultation and for training contents. This allows them to accommodate the requests and situations of private companies flexibly.

iii.

Before private companies offer consulting services as a business, they are free to charge higher for technical assistance.

iv.

The top executives in private industry are not as vulnerable to the influences of the political factors or government budgets as those in the public sector.

v.

Private organizations can provide services that are not covered by the networks of public organizations.

vi.

Since the private sectors are financially independent, receiving no public funding, the members of the private industries are aware of the need for self-sustaining growth for their business. With this, they are very motivated to expand their businesses for the increase of the life span of their organizations.

Human Resource Development System as it relates to Kaizen

Since the beginning of this book, the term “human resource” has been mentioned in a couple of sentences.

Before one can become a qualified kaizen trainer, there are some qualifications for attaining success in this area. There are two levels of personnel that help provide consulting services and training for companies. They are **qualified kaizen consultants and kaizen trainers**.

Kaizen trainers are people who have completed kaizen training. They are classified into two; **the basic kaizen trainers and the advanced kaizen trainers**. Personnel would be classified based on the course they have already completed.

A qualified kaizen consultant is one who has passed the proposed kaizen certification system. Once that is acquired, they are classified further into kaizen consultant, senior kaizen consultant and then, principal kaizen consultant. There are kaizen leaders who lead kaizen activities which organizations which they belong to.

Table 4.1: Kaizen Leaders and their Activities

Qualified Kaizen Consultant	
<ul style="list-style-type: none"> Principal Kaizen Consultant 	These are kaizen consultants who have been promoted. They have management abilities, in addition to their experience as senior kaizen consultants.
<ul style="list-style-type: none"> Senior Kaizen Consultant 	These are trainers qualified to meet other certification criteria.
<ul style="list-style-type: none"> Kaizen Consultant 	They meet the other certification criteria under the consultant qualification certification system.
Kaizen Trainer	
<ul style="list-style-type: none"> Advanced Kaizen Trainer 	These are persons who have completed both the basic kaizen courses and the advanced ones.
<ul style="list-style-type: none"> Basic Kaizen Trainer 	These are individuals in the company that has completed the basic kaizen courses.
Kaizen Leader	
	The kaizen leaders are persons that have completed the kaizen leader course and control in-house kaizen activities.

I believe you now understand the rivers to cross in order to be top-ranking kaizen personnel. What are the roles of these kaizen trainers?

Table 4.2: Roles of Kaizen Leaders and Trainers

	Kaizen Leader	Kaizen Trainer
Definition	Kaizen leaders are a staff member(s) of the company or any public agency that implements the activities of kaizen in the organization. They are trained directly by kaizen trainers and experts and it plays a leading role in the activities of kaizen.	A kaizen trainer is someone who is not an employee of the company or organization. They give guidance on the different kaizen activities from outside and not within the enterprise. As already mentioned, there are two types of kaizen trainers. They are the bias can the advanced kaizen trainers. The basic kaizen trainers are in charge of offering guidance on basic kaizen. An example of basic kaizen is 5S. The advanced kaizen trainers give guidance on both basic and advanced kaizen training for enterprises of different sizes in different locations.
Selection Criteria	<p>Anyone that meets the criteria of kaizen can be selected by the top management of the industry. The criteria are;</p> <ul style="list-style-type: none"> a. A group-leader with practical knowledge and experience and is able to demonstrate leadership for the guidance of employees at the workplace. b. The kaizen leader can also be selected from circle leaders. This occurs if QCC activities have already been in practice. 	<p>Some of the criteria for selection are;</p> <ul style="list-style-type: none"> a. Have a Bachelors' Degree or an equivalent. b. Be committed to the improvement of productivity and quality at your workplace. c. Have about three years of work experience.
Activities	Kaizen leaders play a leading role in the carrying out of the activities of kaizen which have	Kaizen trainers identify problems in an enterprise or industry, they propose the

	been proposed by kaizen trainers and experts. They also organize QCCs for kaizen activities.	relevant kaizen activities required in the company and also instruct people on the application or implementation of the kaizen techniques which have been acquired from advanced kaizen trainers or experts.
Training Methods	<ul style="list-style-type: none"> a. In-Company Training (ICT) b. Class-Room Training (CRT) on the basic kaizen skills and awareness on how to identify problems. c. Presentations at kaizen conferences. 	<ul style="list-style-type: none"> a. In-Company Training at the pilot enterprise or company. b. Overseas training for kaizen trainers. c. Class-Room Training (CRT).
Evaluation	The kaizen trainers or experts help evaluate the kaizen leaders based on their attendance at CRT, process and the results of the kaizen activities, the performance of the soon-to-be kaizen leaders at kaizen conferences.	The kaizen trainers or experts evaluate the kaizen trainers candidates based on the result of their skill maps, ICT performances, and written examination.

Kaizen Trainers Requirements

The requirements are divided into two capabilities; **basic and specific capabilities**.

	Basic capabilities	Specific capabilities
	Have a Bachelor's degree or an equivalent with about three years of experience.	Have skills and knowledge in specialized fields.
	Have common social sense, language and mathematics ability, and understanding.	Have both knowledge and experience in fields particularly technology.
	Must have the ability to get things done for the improvement of productivity and quality. Must also have an inquiring mind.	Must have more than his or her share of experience of guidance in the workplace.
	Communication skills are highly	Must have report writing skills.

	required.	
	Have management capabilities.	Must have a major understanding of the concepts and methods of leadership and kaizen.
	Must be committed to the improvement of productivity and quality in the workplace.	Must have the ability and knowledge to provide guidance in fields of productivity and quality. Must also have business management skills.
	Have negotiation skills, cooperativeness, sociability, presentation skills and also sympathy.	
	Must be able to provide solutions and directions to problems and also have the ability to cultivate human resources.	

Specific capabilities are divided into related fields of productivity and quality and also to the business management field. Considering the structure of the industry in Africa and its level of corporate development, there are certain scope and levels to cover in both fields;

a.

Knowledge in Productivity improvement and quality: Kaizen trainers are expected to have the ability and knowledge that is related to kaizen. Considering the general situations of the industries in Africa, not every kaizen trainer is expected to have acquired a high-level of kaizen-related skills. The basic kaizen skills (Visual Control, 5S, etc.) are preferred especially for kaizen in small-scale companies and micro-companies. Looking ahead to the future, advanced kaizen skills (TPS, TQM, SMED, Layout, etc.) are needed for the enhancement of international competitiveness and also for the development of the industry.

b.

Knowledge in business management: Manager of the Medium, Small and Micro Enterprises (MSMEs) tend to lack the basic knowledge of business management. Kaizen trainers are then asked to provide business management advice in relation to kaizen at workplaces both in the service and the manufacturing industry. In order to assist such companies in the exploitation of outcomes of the activities of kaizen for the growth and development of their

business, it is important to provide guidance on issues that are related to business management. This simply means that the kaizen trainers should acquire skills that are related to productivity and quality improvement and business management.

Below are some of the skills that are necessary for kaizen trainers. They are organized into four modules two for each field;

Table 4.3: Skills Necessary for Kaizen Trainers

Productivity and quality fields	Business management fields
Module I	Module III
<ul style="list-style-type: none"> • Introduction to Kaizen 	<ul style="list-style-type: none"> • Critical Thinking
<ul style="list-style-type: none"> • Productivity and Quality 	<ul style="list-style-type: none"> • Basis of Management
<ul style="list-style-type: none"> • Visual Control 	Module IV
<ul style="list-style-type: none"> • Production Planning 	<ul style="list-style-type: none"> • Marketing
<ul style="list-style-type: none"> • Kaizen Consulting 	<ul style="list-style-type: none"> • Business Development
<ul style="list-style-type: none"> • Basic 7QC Tools 	<ul style="list-style-type: none"> • HRM & Organizational Behavior
<ul style="list-style-type: none"> • Inventory Control 	<ul style="list-style-type: none"> • Accounting
<ul style="list-style-type: none"> • 5S 	<ul style="list-style-type: none"> • Strategic Planning
<ul style="list-style-type: none"> • Method Study 	
<ul style="list-style-type: none"> • Waste Management 	

<ul style="list-style-type: none"> • standardization 	
<ul style="list-style-type: none"> • QCC 	
Module II	
<ul style="list-style-type: none"> • Time Study 	
<ul style="list-style-type: none"> • Line balance 	
<ul style="list-style-type: none"> • SQC 	
<ul style="list-style-type: none"> • TPS 	
<ul style="list-style-type: none"> • TPM 	
<ul style="list-style-type: none"> • Cost Management 	
<ul style="list-style-type: none"> • Advanced 7QC Tools 	
<ul style="list-style-type: none"> • Work Sampling 	
<ul style="list-style-type: none"> • SMED 	
<ul style="list-style-type: none"> • Layout 	
<ul style="list-style-type: none"> • TQM 	
<ul style="list-style-type: none"> • New 7QC Tools 	

As the module is arranged, this is the order in which they should be completed. In order to help SMEs apply the skills of kaizen which is learned from Module I that would allow them to grow and survive, the skills and knowledge required in business management are needed. So, the first modules to be studied are modules I and III, which are the bias kaizen skills. Once they have been studied, the specialized methods for the improvement of productivity and quality in a workplace in Module II should come next. It constitutes a part of advanced kaizen. The acquisition of deeper skills and knowledge on business management is covered by Module IV. They are necessary for the advising of companies with better workplace organization when trying to help them improve their performance.

There are certain standard programs for kaizen trainers. The training processes are as follows;

Table 4.4: Kaizen Training Programs

Training Process	Objectives
Class-Room Training (CRT)	Acquire the theory of skills which is necessary for kaizen from experts or advanced kaizen trainers.
In-Company Training (ICT) at pilot enterprises	Learn and improve practical skills by giving guidance to pilot enterprises.
Overseas Training (This is Optional)	Improve the acquired skills by learning the advanced experiences of other industries in other countries.
Continuation of ICT at pilot enterprises	Proffer more guidance to business and enterprises; improve the ability to apply acquired skills with the experience of learning in overseas training.
Evaluation of Abilities	Be evaluated on the level of skills that have been acquired from the previous training processes.
Kaizen Trainer Recognition	Certification offered as having the capabilities for the provision of kaizen guidance to industries and for self and also to train lower-level kaizen trainers if he or she is a student for the advanced kaizen training.
Give kaizen guidance and train lower-level kaizen trainers	Proffer help and guidance to businesses and to continuously train lower-level kaizen trainers.

In the Training of trainers approach, the Japanese experts' train candidates for advanced trainers at the beginning (first stage), then the Advanced Trainers would train those who just completed the Basic training and Advanced junior trainers. Advanced Trainers can also improve their own skills and capacities through the training of the candidates.

In-Company Training (ICT)

This form of training is conducted with the guidance of the advanced trainers or the Japanese experts in the form of on-site kaizen guidance for businesses or enterprises to enable them to obtain the abilities to apply the learned skills in the CRT.

Below shows the general flow of ICT activities conducted in kaizen guidance form at the pilot enterprises;

ICT Activities	ICT Items
Pilot Enterprise Selection	Select the pilot organization or enterprise of ICT based on the selected criteria.
CRT for Kaizen Leaders	Train the leaders of the pilot organization.
CRT in the Enterprise QCC Setup	Train every employee of the establishment and set up QCC.
State Analysis Presentation Kaizen Themes determination	With the help of the kaizen leaders, analyze the present conditions quantitatively and determine the themes for kaizen.
Base Line Setup	Hold on to the current situation which is related to the kaizen themes and also proffers help and guide the baseline setting.
Kick-Off	Guide the top managers of the establishment to announce the commencement of kaizen officially.
Implementation of Kaizen	Guide the leaders of kaizen for problems under the advanced kaizen trainers or Japanese experts.
Confirmation of Result	With the help of the kaizen leaders, confirm the results of kaizen.
Standardization	Guide to train every employee for the standardization of new methods.
Result Presentation	Be of assistance to the kaizen leaders to present the results of kaizen at any kaizen conferences.

There are certain methods for the selection of pilot enterprises participating in ICT.

Methods for the Selection of Pilot Enterprises Participating In the In-Company Training

- a. Determine the necessary requirements for the selection of pilot companies.
- b. Make a list of candidates of the pilot enterprise.
- c. Visit enterprises for evaluation by;

- Checking the site of the workplace. You can check the process flow, work-in-process, maintenance, and operations of equipment, quality, visual control, storage practiced at the workplace, etc.

- Checking the business attitude of the top-level management, the understanding of productivity and quality, the motivation of the kaizen leaders or the QCC leaders as kaizen leader candidates, strong interest in kaizen, awareness of the importance of kaizen which is practiced at the workplace and employees' consideration, etc.

- Identifying potential kaizen themes in which the visibility of kaizen achievements would be obtained.

- Confirming the degree of interest which is identified in the kaizen themes through the exchange of opinions via conferences, discussions, etc. with the top management and the already-assigned kaizen leaders.

- d. Select pilot enterprises.
- e. Begin with the kaizen guidance for the selected pilot enterprises.

How can pilot enterprises be evaluated? The evaluation is in the form of numbers 1 to 5.

- 5 – Excellent
- 4 – Good
- 3 – Normal

- 2 – Rather Poor
- 1 – Poor

Below is a sample of the Pilot Enterprise Evaluation sheet;

Table 4.5: Pilot Enterprise Evaluation Sheet

Items Required For Selection			Evaluation Contents	Evaluation	Marks
Top Management		Problem consciousness	Numeric goals and Policy.	5: The issues and targets of the enterprise are clear. 3: the issue and targets of the enterprise are recognized to an extent. 1: There is no awareness of the issues and targets.	
		Eagerness for Kaizen	Interest in Kaizen.	5: there is an effort to consider kaizen as one of the activities of the enterprise. 3: there is interest in Kaizen 1: there is no interest.	
		Leadership	A number of visits to the workshop and office and the number of directions for improvement activities to employees.	5: subordinates are led by example. 3: Leadership is displayed depending on the situation. 1: Everything is left on the subordinates.	
Level of Challenge and Kaizen Theme		Excepted Themes of Kaizen	Themes need to be reviewed to be agreed upon during the interview.	5: Already have ideas on the kaizen themes. 3: have a rough idea on the kaizen theme. 1: No idea whatsoever is had.	

		Implementation and Result	Degree of implement-ability and feasibleness.	5: The themes are feasible and implementable. 3: The themes are feasible and implementable to an extent. 1: the implementation of the theme is low.	
Kaizen Leader		Leadership Experience	Leaders' strengths and weaknesses.	5: there is personnel with sufficient leadership skills. 3: there is personnel with some leadership skills. 1: there is no personnel with leadership skills.	
		Eagerness to Kaizen	The processes and items you want improvement on.	5: there is strong eagerness from the leaders to kaizen. 3: There is eagerness from some leaders to kaizen. 1: There are no leaders with eagerness to kaizen.	
		Electrical devices operating skills	Examples are; ability to use Microsoft Suite, digital cameras and also e-mails and web browsers.	5: have sufficient experience. 3: have some experience. 1: Have no experience.	
Kaizen Team		Discussion and meeting facilities.	Examples are; availability of projectors, employee noticeboard, the internet. Whiteboard,	5: there are sufficient facilities. 3: there are meeting rooms. 1: there are no facilities.	

			pen, camera, etc.		
		Team availability.	The number of team members and teams, and how much time is spent on kaizen activities.	5: The necessary amount of time is spent on kaizen activities. 3: Some amount of time is spent on kaizen activities. 1: No time is spent on Kaizen activities.	
			Total Marks		
			Selection: Yes/No		

Some important evaluation viewpoints are;

- i. The willingness to assign In-company personnel that is suitable to uphold the task of being a kaizen leader.
- ii. The capacity and willingness to accommodate an ICT team with the inclusion of working facilities.
- iii. The high commitment of the top managers in order to conduct kaizen to improve productivity and quality.
- iv. Knowing whether to include organizations or companies when targeting every sector in the service of public sectors and service as well as those in the manufacturing sector of the nation.
- v. The willingness to provide the right management data and also to disclose the kaizen training results in conferences or other kaizen occasions.
- vi. The stability of the business and management to be able to implement kaizen and also check effects for verification.
- vii. Permission for video recording and photographing which is required for the activity of consultation.

The art of choosing the right field leader is very important for the adoption of kaizen activities as a daily practice. Good leadership and decision-making leaders fully committed to productivity and quality improvement

and also the activities of kaizen are necessary in order to boost the morale of the remaining employees of the organization.

In-Company Training for Basic Trainers

It is important that due to the multiple candidates for training, these candidates are divided into teams and the ICT is conducted on a per-team basis. For the effectiveness of training, and the ease of conducting the kaizen activities, there should be about 2-4 people in one team or 3-5 people, including the senior Advances Trainer or an expert.

If the technical guidance for the pilot enterprise takes at least half a day per session, it is realistic for an ICT team to visit one selected pilot enterprise daily. This is in consideration of the fact that there might be a necessity for each selected pilot enterprise to carry out kaizen activities proposed by the team. It is appropriate to visit once every two weeks. Each team should be able to visit about three companies weekly, having six companies as the target number of pilot enterprises. It is also necessary to produce a visible Kaizen effect by visiting about 20 times having it at the back of your mind that a standard ICT period is 18 weeks. Summing it up, a standard training period for Basic trainers is 6 months. The 6 months would comprise of 2 weeks for CRT, 3 weeks for the selection of pilot enterprises, 1 week for CRT for kaizen leaders, and 18 weeks for ICT.

In the activities of kaizen, the implementation process and the outcome are very important. They are necessary for the measurement of activity results in numerical terms such as the productivity improvement rate and the number of QCCs.

Table 4.6: Basic Trainer Activities for the Implementation of Kaizen

Activities at the visitation to enterprise	Activities within the consulting team
Kaizen Training I <ul style="list-style-type: none"> • Inspection of the site with kaizen leaders • Finding problems and suggestions • Meeting with QCC members 	<ul style="list-style-type: none"> • Confirming the problems found and suggestions • Study for suggestions on the next visit • Report writing of consultations and submission
Kaizen Training II	

<ul style="list-style-type: none"> • Inspection of the site with the Kaizen leader • Confirming progress and suggested items • Finding problems and suggestions • Meeting with QCC members 	<ul style="list-style-type: none"> • Confirming the progress of suggested items • Conforming problems and suggestions • Study for suggestions at next visit • Report writing of consultations and submission of the report.
Kaizen Training III <ul style="list-style-type: none"> • Inspection of the site with kaizen leader • Confirming the progress of suggested items • Finding problems and suggestions • Meeting with QCC members 	<ul style="list-style-type: none"> • Confirming the progress of suggested items • Conforming problems and suggestions • Study for suggestions at next visit • Report writing of consultations and submission of the report.
Kaizen Training IV <ul style="list-style-type: none"> • Inspection of the site with kaizen leader • Confirming the progress of suggested items • Confirming the kaizen results • Meeting with QCC members • Assisting for standardization • Assisting for presentation 	<ul style="list-style-type: none"> • Confirming the progress of suggested items • Confirming kaizen results • Report writing of consultations and submission of the report • Consulting review

Basic trainers are expected to compile a consulting report on guidance such as problems found and recommendations after every visit that is being submitted for each company. Once that is completed, a case sheet should be prepared for each company.

During ICT, the following key points are to be adhered to;

- a. The objective of each kaizen activity in pilot enterprises is to provide In-Company Training for the kaizen trainers as well as verifying the effectiveness of kaizen. This should not be forgotten.
- b. Advice and guidance for kaizen trainers should not be provided in the presence of the employees of the pilot

enterprise so it would not cause them, to doubt the capacity of the trainers.

- c. When a visit is made to the pilot enterprises, a team leader should be appointed to be a form of contact for the particular enterprise. The person appointed is responsible for the preparation of case sheets and consulting reports.
- d. Consulting reports should be sent to the selected pilot enterprise with enough time in-between before the next visit.
- e. The consulting reports should include the provision of advice in a cumulative and chronological order to make the reader understand the process of consulting service.

ICT for Advanced Trainers

This is basically conducted in about 6 pilot enterprises with the same procedures meant for the Basic Trainers except for the time it takes for ICT, selection of the pilot enterprises and CRT are longer. The reason for this is because the training incorporates certain subjects and themes with higher technical levels making it difficult for them to find the right pilot enterprises. Also, the long hours are needed in order to obtain the right effects from the activities of kaizen. For Advanced Trainers, the standard training period is about a year. It consists of 3 weeks of CRT, 1 week for CRT for top managers and kaizen leaders, 4 weeks for the selection of pilot enterprises and also 40 weeks for ICT. The time for training both Advanced and Basic Trainers is based on the information and experience obtained from implementing kaizen in countries, specifically in Africa.

Class-Room Training (CRT)

This training simply lectures which are provided by Advanced Trainers or experts prior to ICT, basically for the purpose of educating the required theoretical elements of skills to both Advanced Trainers and Basic Trainers alike.

The first stage for CRT is prepared by experts; the next stage is for the Advanced Trainers to revise the textbooks. This is important as it is to be in-step with the progress of the dissemination of kaizen.

Table 4.7: ClassRoom Training for Basic Trainers

Days	Classification	Time (9:00am to 12:00pm)	Time (1:00pm to
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			4:00pm)
1	Basic Kaizen	Productivity and Quality	Productivity and Quality
2	Basic Kaizen	Kaizen	Kaizen
3	Basic Kaizen	5S	Visual Control
4	Basic Kaizen	Muda-Dori (Waste Management)	QCC
5	Basic Kaizen	Basic 7QC Tools	Inventory Control
6	Basic Kaizen	Production Planning	Production Planning
7	Basic Kaizen	Method Study	Method Study
8	Basic Kaizen	Standardization	Kaizen Consulting
9	Basic BM	Kaizen Consulting	Basic of Management
10	Basic BM	Critical Thinking	Critical Thinking
	Total	60 hours (10 days)	

Table 4.8: ClassRoom Training for Advanced Trainers

Days	Classification	Time (9:00am to 12:00pm)	Time (1:00pm to 4:00pm)
1	Advanced Kaizen	SQC	SQC
2	Advanced Kaizen	Advanced 7QC Tools	New 7QC Tools
3	Advanced Kaizen	New 7QC Tools	SMED
4	Advanced Kaizen	Time Study	Work Sampling
5	Advanced Kaizen	Line Balance	Layout
6	Advanced Kaizen	Cost Management	Cost Management
7	Advanced Kaizen	TQM	TQM
8	Advanced Kaizen	TPM	TPM
9	Advanced Kaizen	TPS	TPS
10	Advanced BM	Accounting	Accounting
11	Advanced BM	Marketing	Marketing
12	Advanced BM	Human Resource Management	Human Resource Management
13	Advanced BM	Strategic Planning	Strategic Planning
14	Advanced BM	Business Development	Business Development
15	Wrap up	Group Discussion	Group Presentation
	Total	90 hours (15 days)	

Kaizen-related Human Resource Development (HRD) Program Management

To ensure smooth training for both Advanced and Basic Trainers, there are some activities and actions that are to be undertaken. These activities range from the planning stage to the implementation stage.

Planning Stage

- i. **Formulation of HRD plan:** The objectives of every kaizen trainer, the number of people to be trained and the training schedules are to be determined in this stage.
- ii. **Securing Advanced Trainers or experts as instructors:** Possible candidates for this stage are experts in third countries (Japanese experts inclusive) and those from countries concerned who have been trained and also recognized to have the equivalent ability of the experts from the third countries.
- iii. **Securing Trainees:** The trainees can either be staff members of the kaizen promotion organizations or those belonging to related agencies or even people who are participating from the private sector. Trainees from related agencies are expected to go back to their previous positions in the company after the kaizen-related activity training. This should be in agreement with regard to the second commandment to kaizen implementation organizations as required. As for the trainees from the private sector, there should be a clarification of future careers to determine whether they may be hired by the promotion organizations as advanced trainers of Basic Trainers.
- iv. **Training fees determination:** This is a very important factor to be determined. It is an important factor for the participation of those from the private sector. This should not be a big problem for those who belong to the implementation organization of kaizen or other related government agencies.
- v. **Treatment of Trainees Decision:** It is of basic importance to decide on the treatment of trainees. Such treatment means payment standards for food, allowance availability, daily allowance and accommodation for visit to companies in remote locations.
- vi. **Preparation of materials and equipment for CRT:** Teaching materials required for CRT are prepared in presentation

software; some of which are Microsoft PowerPoint, Slide Sheets, etc. For this to happen there should be the provision of a Personal Computer and a Projector in addition to a marker and a whiteboard.

- vii. **Workspace securing:** It is a very important point to secure meeting rooms that would be needed for ICT and CRT-related meetings with workspace for the preparation of consulting reports, and other required documents for every trainee.
- viii. **Selection of pilot enterprises for ICT:** It is important to decide on how to allocate pilot enterprises for ICT between regions, sectors, and sizes.
- ix. **Securing mode of transportation:** It is very important to secure vehicles that would be needed for the transporting of ICT teams for their visits to pilot enterprises assigned to them as the equipment might be located in remote places. When there is simultaneous on-site guidance conduction between two or more teams, it is a duty to secure vehicles for as many as their number is.

CRT Implementation Stage

- a. **Attendance Check:** When there is proper attendance, it constitutes a recognition requirement for both Advanced and Basic Trainers.
- b. **Monitoring:** This is made in regards to whether the instructors conduct a lecture in an interactive way, whether there are lively exchanges of ideas and experiences among one another, etc.
- c. **Evaluation:** A questionnaire survey should be conducted to hear the different opinions of the trainees and also reflect on them in the next CRT program as is required.

ICT Implementation Stage

- a. **Trainees Participation:** When there is proper attendance, it constitutes a recognition requirement for both Advanced and Basic Trainers.
- b. **Progress of Kaizen activities confirmation.**

- c. **Evaluation of the kaizen guidance by the pilot enterprise through hearing or questionnaire surveys.**
- d. **Recognition of Advanced and Basic Trainers:** For this to occur, decisions are to be made before the handing over of the certificates of recognition.

Recognition requirements for both Advanced and Basic Trainers

Once the training has been completed, recognition is made to determine or confirm those who are qualified to be either Advanced or Basic Trainers. An example is shown below;

Table 4.9: Recognition Requirements for Kaizen Trainers

CRT
Attendance Ratio: 90% and above Written examination: 65 marks and above
ICT
Number of pilot companies to give Kaizen guidance: 5 companies and above for both Advanced and Basic Trainers Number of visits to pilot companies: <ol style="list-style-type: none"> a. Total visits with an expert: 805 and above b. Visits by Advanced or Basic trainers alone: at least once a month for each company
Number of Kaizen guidance cases: Two and above per company Report Submission for each visit: 100% Case sheet submission: one or more case sheets per company
SKILL LEVEL
Evaluation by skill map: 3.5 points and above on average, 2.0 points and above for all selected skills
TRAINING PERIOD
Training Period: <ol style="list-style-type: none"> a. Basic Trainers: 6 months b. Advanced Trainers: 1 year once they have been certified as Kaizen Trainers
Attendance for regular meetings with an expert: 70% and above.

Certification System for Kaizen Consultants

Undergoing training as a kaizen trainer does not only build your capacity to implement kaizen to other enterprises in the country in order to aid in the

improvement of productivity and quality but in the transfer of skills and knowledge from Advanced Trainers to Basic Trainers that would help contribute in the increase in the dissemination of kaizen from the point of view of the human resources development. It does not only guarantee the sustainability of the dissemination of kaizen but to go one step further and implement the certification system of kaizen. A major advantage of this certification system is to allow kaizen trainers to be motivated by helping them see a clearer career path. Such certification can be used as benchmarks for clients in selecting the right kaizen consultant they require. Advanced Trainers who have completed the training programs of both Advanced and Basic Trainers are eligible for the application for certification as kaizen consultants. Below are the requirements for the different kaizen consultant titles;

Table 4.10: Requirements for Kaizen Consultant Titles

Kaizen Consultant Titles	Qualification Requirements
Principal kaizen Consultant	<ul style="list-style-type: none"> a. To complete both basic and advanced kaizen courses and also have kaizen consulting experience of about 5,000 hours. b. To pass the oral and written examinations.
Senior Kaizen Consultant	<ul style="list-style-type: none"> a. To complete both Basic and Advanced Kaizen courses and have a kaizen consulting experience of about 3,000 hours. b. To pass the oral and written examinations.
Kaizen Consultant	<ul style="list-style-type: none"> a. To complete both Basic and Advanced Kaizen courses and have a kaizen consulting experience of about 1,000 hours. b. To pass the oral and written examinations.

It is better to link the certification systems to the training curriculum for every kaizen trainer. Basic Trainers spend approximately 500 hours for kaizen guidance during training while Advanced Trainers spend approximately 1,500 hours for kaizen guidance during training.

The Establishment and Management of the Certification System

For the development of the standards for certification, it is ideal to determine who conducts the certification examinations and how it is done in advance. Also, it is ideal to determine the interval and the conditions to review for the renewal and the expiration date of the certification to ensure the credibility of the consultants and what qualities they possess.

For the successful establishment and management of kaizen consultant certification, consider the following items;

- a. **The establishment of a certification board:** The certification system has to maintain very high levels of objectivity and fairness if it is intended for those in the private sector including the staff members of the kaizen promotion organizations. It is also ideal for the inclusion of the representatives from agencies, ministries and other external organizations. The certification board should operate mainly with three positions which would be explained below with guidance committee members being at the top level of the structure, hierarchically.
- **The certification board guidance committee members:** They need to have broad and in-depth knowledge in kaizen and should be able to establish the certification system. Necessary revisions to the system can be made after its establishment whenever such a situation arises.
- **Certification examination members:** These set of people should be able to prepare the written examinations and also evaluate the test-takers' ability during oral examinations appropriately. They are also the ones who would determine whether the certification should be renewed. This is done by monitoring the activities after the certification has been acquired by the trainers. Consulting activity reports which

have been prepared by the applicants are checked and interviews can be conducted with the enterprises which have been enlisted in the reports for confirmation.

- **Certification board secretariat:** They perform regular monitoring and administer the certification exam after the certification has been granted.
- b. **The development of a kaizen consultant certification system by the certification board:** For the establishment of a kaizen consultant certification system, the certification board is responsible for such actions, the details and also the conditions of the certification. It is highly recommended to prepare a chart to present the levels of difficulty and the scope with regards to the skills and knowledge essential as certification criteria for kaizen guidance.
- c. **The management of the certification system:** For the continuous operation of the certification system, it is ideal to consider incentives for the certification holders. It may be somewhat difficult for the certification to be set as an occupational license for giving kaizen guidance to others. It is however effective and possible to establish policy measures; some of which can be introducing certified consultants to enterprises in search of consultants for the implementation of kaizen on a preferential basis or for the provision of subsidies for enterprises that are in need of certified kaizen consultants.

Chapter Five

Kaizen Training

Kaizen Training of Intra-Firm Human Resources

Top Management Training

1. **Top Management Role:** For the success of kaizen activities, the key factors of the top management are to be strongly committed and be great leaders. Demanding results from the implementation of kaizen without participating in any of its activities would not raise the motivation of employees and fewer results, rather than expected, would be generated. The top managers must be able to understand the soon-to-be-listed key points for the implementation of kaizen;
 - a. What does Kaizen mean?
 - b. What is the difference between innovation and kaizen?
 - c. What are the benefits of kaizen?
 - d. What methods are necessary to measure the results of kaizen?
 - e. What methods and procedures are required for the implementation and monitoring of the activities of kaizen?
2. **Actions necessary to be taken by the top managers to show commitment to kaizen.**
 - a. **Kick-off meeting:** This marks a formal declaration of the official beginning of kaizen activities by the top managers to every employee of the organization. It demonstrates the strong commitment of the top managers to kaizen thereby raising the motivation of employees.
 - b. **Support for Kaizen Leaders:** Supports can be in the form of appointment and announcement of kaizen leaders, permission to conduct some kaizen activities during working hours and other indirect support they can offer.
 - c. **On-site patrol:** This has to do with the visiting of shop floors in order to obtain information on working conditions and also

the operation of equipment by the top managers.

- d. **Attendance at kaizen meetings:** Attendance can clearly show how strongly committed the top managers are to their employees.
- e. **The required investment for kaizen:** one major feature of kaizen is making use of existing management resources without making much investment. Minimal investment is usually required for this.
- f. **Diagnosis by top managers:** The top managers receive reports regularly from the QCC team and then evaluate the status of the kaizen activities. This is a valuable opportunity to let the voices of the top managers be heard by the employees.
- g. **The awarding system:** Any incentive given to an individual or a team is given because they have produced excellent results that help for sustainable implementation. Some of the possible incentives are;
 - Prize gifts
 - Reflection on the assessment of personnel
 - Prize money
 - Commemorative dinner and picture session with the top managers
 - Awards

To ensure that the top managers are aware of the activities detailed above, it is important to conduct training before attempting to conduct CRT training for kaizen leaders. It not only helps them to have a sound understanding of kaizen, but it gives them the opportunity to exchange vital information and also share problems with the top managers of other companies.

Kaizen Leaders Training

1. **The role of kaizen leaders:** In kaizen activities including the implementation of recommendations made by both Advanced Trainers and Basic trainers, kaizen leaders take the lead. One of the keys to the success of kaizen activities is leadership and commitment. Some of the roles of kaizen leaders are briefly summarized below;

a. Kaizen leaders are to serve as one for the implementation of kaizen activities under the guidance of a kaizen Trainer(s). some of the activities they can perform are;

- QCC startup
- Transfer of basic knowledge such as problem-solving techniques, QC tools, etc., to the members of QCC.
- Guidance while selecting QCC leaders
- Supporting QCC teams or particular members whose activities are sluggish or lagging.

b. Another role is to develop event plans, annual activity plans, educational plans, technical plans, etc. for QCC activities with budget proposals, create internal posters, prepare logos and pamphlets, etc. for the promotion of kaizen activities and also obtain approval from the top managers before implementing them.

c. To compile progress reports of all kaizen activities and send them to the top managers.

d. To prepare presentations, presentation slides and also assumes leadership at kaizen conferences or meetings.

2. **Kaizen leaders training:** The capacity of kaizen leaders can be built through the following listed experiences and activities;

a. Sharing awareness on problems faced in group discussions in the CRT.

b. Learn the basic knowledge in CRT which would be organized by the kaizen leaders for the pilot enterprises before beginning an ICT.

c. Implement activities related to kaizen.

d. Mentor QCCs under the guidance of Basic Trainers, Advanced Trainers or kaizen experts.

e. Make presentations at kaizen meetings and conferences.

3. **Class-Room Training for Kaizen Leaders**

4. **In-Class Training for Kaizen Leaders**

5. **Recognition of Kaizen Leaders**

Advantages of Training and Recognition of Kaizen Leaders

- a. There is the availability of internal personnel with sufficient kaizen skills and experiences.
- b. The official recognition of kaizen leaders serves as motivation to play leadership roles.
- c. Promotion of sustainable kaizen activities within enterprises.
- d. Recognition of kaizen leaders serves as a status, thereby providing some personal advantages such as allowing them to take pride in their work and also have an advantage in terms of personnel evaluation.
- e. When there is an interchange between kaizen leaders in other enterprises, it allows them to learn with and from each other.
- f. The training of kaizen leaders provides opportunities for aspiring candidates to gain some teaching experience.

Kaizen Overseas Training

This is not compulsory but sending Advanced and Basic trainers to further their training in foreign countries serves as a bonus and is very effective for them to develop their knowledge and skills further; some of which include hands-on consulting skills.

Important Points to Be Considered For Effective Use of Overseas Training

Participating in overseas training without having a clear sense of purpose leads to having a very limited effect. Some important points to be considered are;

- a. Select a suitable course according to the career you intend to participate in as a kaizen Trainer.
- b. A mismatch in the technical specialty or level may prevent some trainees from understanding the contents of their selected courses.
- c. Personnel selection is to be made by taking into account some factors on every level, not just on technical levels, and the willingness and motivation as Kaizen trainers with a good

- personality to ensure good human relations and also effective communication with client companies.
- d. This form of training can be used as a way of raising motivation within the entire career path for kaizen trainers.
 - e. When coming to training, participants should have a strong and firm attitude for problem-solving. They need to have a clear understanding of problems that are to be solved and are related to productivity and quality improvement, the dissemination of kaizen and issues that would be addressed in the respective organizations before training can be attended.
 - f. Each participant must be able to compile both experience and knowledge that are obtained in the course of training as materials that would be used practically and would be shared within their organizations after returning to their respective home countries. Such experience and knowledge can also be used for consulting services for clients.
 - g. During the course of their training, the participants should try to strive hard to learn the techniques and knowledge of kaizen, the history and culture, organizational know-how and social institutions of the country where the training is being held.

Total Quality Management (TQM) and Kaizen

Kaizen is a concept that contains the combination of activities and initiatives like suggestion systems and TQM.

What exactly is TQM? It is a movement that is centered on the improvement of managerial performance at every level in the organization. Total Quality Management deals with safety, quality assurance, employee involvement, safety, cost reduction, productivity improvement and continuous improvement.

In the TQM process, people are very important and it is strongly emphasized. Some considerations such as training, teamwork, culture, incentives and work involvement are typical in TQM.

The TQM journey deals with the cross-functional management of the organization, the development of the organization and also the deployment of quality in the organization. TQM is used as a tool and a concept for the

improvement of the overall performance of the individuals in the organization.

TQM integrates existing improvement efforts, fundamental management techniques, and the technical tools which are under a disciplined approach that is focused on the continuous improvement of the organization. These activities are ultimately focused on the increase of user-customer satisfaction. It is necessary to emphasize the technical aspects of improvement which can either be technology-related or mechanically-related with very low emphasis on people and their roles in such processes. For the improvement in productivity and quality to achieve competitiveness, there is a need for an enterprise to capture the potentials implicit in the workforce by allowing every employee to perform his or her job right at the start. It would also require the top managers to demonstrate to every worker in the organization that for the improvement of quality, it requires the commitment and the pursuing of efforts continually by every single one of them.

An environment must be provided by the organization in which every employee would cooperate voluntarily to achieve the objectives of the organization. It would also require that the management would accept every idea that comes from the employees that want to contribute or can contribute. The top management flows down ideas and goals and then encourages ideas to flow upwards to them. The philosophy of TQM helps provide comprehensive ways to improve the organizational quality by examining the way in which work is done from an integrated, systematic, consistent and organizational perspective.

The Total Quality Management journey's major focus is to;

- a. Satisfy the needs of the external and internal customers;
- b. Involve every functional unit in the organization;
- c. Understand the effects of variation on the processes of TQM and the implications for the improvement of such processes;
- d. Emphasize on the continuous improvement of kaizen; and
- e. The involvement and motivation of employees to become the major driving force behind the improvement of productivity and quality in the organization.

If there is no patience during the TQM journeys, the result would be disappointment and frustration. Patience and leadership are crucial in the promotion. It is very obvious that the involvement of employees and the process-oriented approach of manufacturing are major foundations, hence, the cornerstones towards TQM. The structure and activities of the team are basic requirements for the fostering of the individual participants and the enhancements of the organization's ability to pursue these processes across.

TQM which drives improvement in organizations is analogous to the kaizen approach. The characteristics and various elements are very supportive of each other and both of them can mandate a united organizational concept.

Rewards and Recognition Functions of Kaizen

In the corporate culture, there are three (3) very important components: **corporate values, leadership, and structure of rewards and recognition of the organization.** The rewards system strongly reflects the democratic, innovative and corporate philosophy. It reinforces the commitment of employees to the corporate culture and values.

Rewards and Recognition (R&R) are great tools for organizations that are aspiring for TQM. Some examples are;

- a. R&R activities aid in the provision of feedback which is a major element of Kaizen. It indicates achievement too. These recognitions are forms of feedback about the result of team efforts and individual. It shows the members of the team that they are doing the right thing and not just that, but doing it toward continuous improvement. This feedbacks in recognition form can be gotten from other teams, supervisors, external customers in the market place and internal customers within the organization.
- b. R&R help improves the reinforcement of the quality-related behavior and achievements of an organization.
- c. The different forms of recognition show the public that members of the team and individual players have achieved some degree of success with the frame of TQM. They tell the world of the jobs they have been consistent about and how well they have been doing them. So, these rewards and

- recognition strongly highlight employees and team players who can make the right contributions to the continuous improvement of the organization or even the effort of TQM.
- d. Recognitions stimulate more efforts in employees.
 - e. R&R shows how organizations appreciate the efforts of employees and organizational values.
 - f. The R&R system increases awareness among those who work in the organization that management is willing to reward them if they seriously apply the essential TQM values which are continuous improvement, quality and customer satisfaction. With this, the employees would be motivated greatly if they continue to work in the organizations and are consistent in their jobs and the rewards and recognition processes. These workers would perceive the initiative of the management as an effort by the management of the organization.
 - g. The processes of TQM and kaizen philosophy demand empowered by team players, cross-functional activities and employees. They help motivate the various teams and individual members to continue participating actively in whatever function they perform in the organization. It would help in the creation of positive environments for them to compete against each other thereby giving them a win-win situation between employees and organizations. These employees can be motivated when they make use of the various TQM tools (which have already been mentioned somewhere in this book), solve problems and also interact with external and internal customers.

Team Structures in Organizations and their Characteristics

In an organization, there are different types of teams. Some of the most common ones are;

- a. Intact workgroups
- b. Problem-solving team
- c. Cross-functional teams
- d. Implementation teams and proactive teams, and
- e. Small groups.

These teams contribute to the activities of kaizen. Below are the purposes, characteristics, process and reward system defined for all five groups.

Table 5.1: Purposes, Characteristics, Process and Reward System of Kaizen Teams

	Team Structures	Activities/Purpose	Characteristics Of Members	Tools used/ Process	Reward System
	Intact Work Teams/Groups	Completes daily work	Employees are hired to fill specific job positions such as forklift operator, merge operator, etc. The team consists of any member and this purpose is dependent on the requirements of the job.	Tools used are performance Appraisal Systems. Company procedures policies and guidelines.	Benefits are; Package , Sick Time, Vacation , Rewards are Paychecks.
	Problem-Solving Teams	This team is formed to solve specific problems and implement solutions, measure and evaluate and also refine solutions.	Employees selected from the first group have content knowledge, have the temperament to complete processes and also have a vision. This team consists of about six to ten members.	Tools used are SPC charts, summary report forms, flowcharts, and cause and effect charts. The process used is the problem-solving step process methodology .	The reward system is company-sponsored.
	Problem-functional Teams	This team is formed to evaluate inter/intra company or department processes, to	Selected management and employees from specific departments must have	Tools used are SPC charts, cause and effect charts, summary report forms	The reward is company-sponsored.

		evaluate and also implement solutions.	content knowledge, vision and temperament to complete processes.	and flowcharts. The process used is the problem-solving step process methodology .	
	Implementation/proactive Teams	This team is formed to implement specific systems/processes, evaluate and measure continuous problem-solving measures.	Selected management and employees from the first two groups, which are the intact workgroups and the problem-solving teams, must be in sync. They must have content knowledge, the temperament to implement and solve problems for the entire process and also have a vision. The team consists of about six to ten members, cross-teamed with problem-solving teams.	Tools used are SPC charts, cause and effect charts, summary report forms and flowcharts. The process uses the Implementation Process Methodology .	The reward system is company-sponsored.
	Small group activities	This group is	Selected	Tools used	The

		<p>formed to implement specific systems or process, to measure and evaluate continuous problem-solving measures.</p>	<p>management and employees from the first two groups, which are the intact workgroups and the problem-solving teams, must be in sync. They must have content knowledge, the temperament to implement and solve problems for the entire process and also have a vision. The team consists of about six to ten members, cross-teamed with problem-solving teams.</p>	<p>are SPC charts, cause and effect charts, summary report forms and flowcharts.</p> <p>The process used in the Implementation Process Methodology</p>	<p>reward system is company-sponsored.</p>
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Small group activities: These activities were developed in Japanese companies and aid in the improvement of business processes, and give solutions to problems faced in the organization. The cross-functional teams and quality circles are the most known small groups which were developed in Japan and then transferred to different countries to work.

1. **Cross-functional teams:** These teams are formed to conduct events related to kaizen. The team leader is more concerned with how the members of the team work rather than what they produce. As a team, solutions are sought after even if the problem seems to affect just one member. This simply reflects the kaizen process-oriented approach. The team leader automatically becomes the coach. He or she would be interested in time management, discipline, participation and involvement, communication, morale and skill development of the members of the team. This team is responsible for attaining targeted results by the team itself. The difficult part is trying to tackle the problem first and the measurement of the outcome which is required. The kaizen approach means that rules must be established on the team. Some of these rules are;
 - a. Contribution and participation by every member of the team
 - b. Shared goals by every team member
 - c. Negotiation and resolution of conflicts among group members and not suppression
 - d. Direct criticism at processes and not the individuals.

For the achievement of the same level of performance, here are some ways they can be achieved;

- a. Work teams control functional responsibilities and work design
- b. The machine and human interface is designed to be at optimality
- c. Development and training are considered long life endeavors
- d. The jobs are designed and the skills are set to assure the effective utilization of resources and the quick adaptation to change

- e. The rewards achieved are based on the contributions made for the teams' effectiveness.

2. **Quality Circles:** A quality circle is a group of employees or staff who meet on a daily basis to discuss quality-related problems affecting the organization. The quality circle is a source of empowerment to bring quality improvements and promote them to fulfillment. The adoption of the quality improvement team has a social focus. There must be a commitment among every staff, from the senior management, the unit management, the supervisors and other staff in the circle. For the members to be responsible for test and pilots, they would need budgets. They also need a good approach for the analysis of the context of the problem and the situation defining what the problem is and the relationship between its components. It also needs such an approach for the identification and verification that the cause of the problems actually causes. For the definition of the problem, quantitative measurement is required and a consensus of qualitative judgment too. The problems' impact must be comprehended if it is continuous.

At first, the quality circle was the key to Japan's success. There were so many success stories, but while some companies still made use of them, others saw them as failures. The reasons why they failed are;

- a. Lack of training with tools meant for solving problems
- b. Inadequate measurement of results
- c. Team members not right for solving the problem
- d. Understanding of process by the management
- e. Domination of the process by management

The Quality Circle teams, often called Process Improvement Teams (PIT) or Quality Improvement Teams (QIT) are situated in both public and private sector organizations. The entire management of the organization has to believe in the team process, listen to the proposals laid down and also enable feasible solutions to be accomplished from the pilot stages until it is in full operation. Another important factor in quality service teams is a

desire to avoid blocking and open-mindedness. It is a very useful philosophy that would help in the realization that experiments aid learning.

Suggestions and Proposals Systems and Kaizen

The suggestion and proposals systems are one of the most frequently discussed aspects of kaizen in Japan. It is a part of the kaizen constituents as already described.

Through the suggestion systems, employees are able to participate in the continuous improvement activities in the organizational workplace and this plays a very crucial role in the upgrading of organizational standards. This simply means that the suggestions or ideas of employees serve two purposes. It serves as both a productivity enabler and a culture change enabler.

The suggestions and proposals begin from the perception of a problem and the recognition of the need to solve it. The problems within an organization are the sources of any form of proposal system used in a business place. There are about five (5) levels of problems that can be perceived by employees within an organization. They are as follows;

- a. Level 1: People do not want to see the problems, so they deny them.
- b. Level 2: People find excuses not to solve the problem even after admitting that the problems are there.
- c. Level 3: People are unable to solve the problems because they do not know how to, even after accepting the fact that the problems are really there.
- d. Level 4: People try to visualize the potential problems and attack them by learning the proper methods to do so.
- e. Level 5: People admit the problems, find methods to solve them and also involve people to assist in the attack of the problems. They are willing and always ready to attack problems that to change the organization if there is a need to, after solving the problem.

Now, every management's target is to move their organization's status to either level 4 or 5. This is the reason why there we need a suggestion and

proposal system to enable the organization to move in that direction.

The effectiveness of the suggestions and proposal management system can be evaluated via the combination of some results-oriented criteria, some of which are individual employee suggestions already submitted, the benefits generated via each suggestion, etc.; and the process-oriented criteria during the processing of idea such as employee morale.

In Japan, this proposal system, which was devised, improved and developed, is known as **Teian-system**. This system works on kaizen environments where the process is significantly counted and has to be evaluated by the process-oriented criteria. Below is a list of some elements;

- a. Number of meetings
- b. Rate of participation
- c. Number of intermediate reports
- d. The use of the seven (7) tools
- e. The use of company policies in selecting projects
- f. The originality of approach
- g. The prevention and standardization of the recurrence of problems.

Each element could assign certain points and then evaluation can be accomplished easily.

Quality, Cost, and Delivery (QCD) and Kaizen Goals

It is widely known that customers are kings in the market economy; so, the ultimate goal for every business is to satisfy the expectations of customers for services and products in terms of QCD. The ultimate kaizen goal and its activities aim at improving QCD. This makes QCD a top priority for the survival of a business.

Quality runs throughout the entire process from purchasing to developing, designing, producing, selling, distributing and also servicing of the products or services. Imai said that the jobs of developing new products or services or the design of new processes begin with blueprints and paperwork. Malfunctions can be identified and rectified easily instead of identified later, which would be very expensive to be corrected. The Japanese management made use of the Quality Function Deployment (QFD) or

otherwise known as the Quality Assurance System diagram as a tool to accomplish this task.

Cost-effectiveness follows quality and it refers to the overall cost of designing, producing the product, selling to the customers and also servicing the product or the service provided by the organization. Cost reduction is not cost-cutting; it is about the management of cost. The teams in charge of management cost oversee the development, production, and sale of products or services of good quality while retaining a reduced cost. The way a product is designed, produced and sold would determine if there would be a huge waste of resources or not. The improvement of quality at the same time, reducing cost is the best option for survival. Cost management covers a wide spectrum of activities such as overall cost reduction in a workplace by eliminating waste and cost planning to maximize the margin between revenue and cost. The reduction of cost via the elimination of waste can occur with the waste elimination methods which have been explained earlier. The act of reducing cost by restructuring, harassing suppliers and firing employees would disrupt the quality process and this sometimes ends in the deterioration of quality. The management covers other activities like standardization, policy deployment, education and training. In this present day, where training is concerned, most companies have the tendency to place too much emphasis on the teaching of knowledge. In kaizen, there is great emphasis on the improvement of the fundamental values of the organization which is placed by the group learning places. These values are derived from self-discipline, common sense, economy and order.

Successful Applications and Kaizen

It has been argued that the following elements should be included for successful applications;

- a. Specific goals and objectives with a clear and well-developed mandate;
- b. Highly committed top management to both new ideas and rapid improvement in the organization;
- c. Professional team preparation and education;
- d. Highly experienced and well-trained facilitates for the assessment, the event and the follow-up phase;

- e. Commitment to follow-up and also sustain the improvements made;
- f. A multi-disciplinary team, well balanced, for the event and the sustenance of momentum; and
- g. Clearly defined roles of all participants; the team leader, the process owner, the kaizen consultants and co-leaders.

Measurement of Kaizen Effect

Kaizen promotion organizations are very much interested in the amount of value-added a company generated during the implementation of kaizen; since it is given that the Gross Domestic Profit is the total value-added that is produced in a country for a particular period of time. It is also given that the economic growth rate of a country is equivalent to the increase rate of the total value-added.

Kaizen improves certain business performance such as profits and sales. The effect of kaizen is not always seen in the improvement of the performance of businesses in the short run; but, the value-added generated by a company is the result of every activity in the company, of which part is kaizen. It is therefore unreasonable to attribute every increase in value to kaizen. It is wise to measure the effects of kaizen by assessing the effects on an activity basis.

Some effects of kaizen cannot be qualitatively measured. But for those that can be measured quantitatively, some of them can be indicated in the economic effects while others cannot be indicated in monetary value.

The kaizen effect can be evaluated by measuring them quantitatively by simply using measuring indices at the same time, doing it in monetary terms. There are about four (4) categories of kaizen effects; **qualitative, quantitative, economic and non-economic effect.**

- a. **Qualitative effect:** These are effects that can only be observed and not measured in numerical terms.
- b. **Quantitative effect:** Quantitative effects are effects that can be measured in numerical terms.
- c. **Economic effect:** The economic effects are quantitative effects that are indicated in monetary terms. There are two (2)

types of economic effects; **the actualized economic effect and the proforma economic effect.** The actualized economic effects are economic effects with an actual impact on value-added. Proforma economic effect is the economic effect which has no direct impact on value-added as opposed to actualized economic effect.

- d. **Non-economic effect:** The non-economic effect is a quantitative effect that is indicated in non-monetary terms.

The value-added in question is the net sales of the company with outsourcing cost not included. It can also be said as the capital gain of the company plus the labor cost.

Performance Indices

1. **Evaluation Targets:** These indices are used for evaluation. It consists of not only those used to measure the achievement indices (actual effects) but to evaluate a change in the behavior of the employee and the work environment which includes activity and environment indices (safety). The reason(s) for this are;
 - In addition to the actual effect, kaizen attaches importance to awareness, human resource development and also the change in behavior of employees in an organization.
 - It improves the improvement of work safety.
 - It takes more time until the quantitative and actual effects become easily observable especially when there is a need to spend more time (significant time) for improving and developing the work environment and the management system of the organization before solving problems.

The qualitative effects are usually obtained before the quantitative effects are realized; so, it should not in any way be underestimated.

2. **Evaluation indices:** This consists of raw data that can be directly measured such as length of time, number of times, number of cases and processed data, which are calculated from multiple raw data. In some companies, the operators are

responsible for recording and measuring data which are then made use of by the managers and supervisors to calculate the effects. The kaizen consulting service is often provided for companies that are not able to measure data and record them which are the conducting of proper production management; so, there are cases when the quantitative effects cannot be measured due to the lacking of proper information on the conditions of the company before kaizen activities are begun. For such a case to be prevented, it is of vital importance for the kaizen trainers to collect important data and information during corporate diagnosis and then obtain any missing information in the course of kaizen guidance. The systems to collect and measure important data at the different companies should be built up as part of the activities of kaizen. Some of the environment and activity indices consist of those that are used to measure 5S and the kaizen activity level relating to morale and work safety.

Raw materials that are not monitored on a daily basis should be measured by the operators and field supervisors before and after the implementation of kaizen.

The effect of kaizen does not always come out during the process where the activity of kaizen is implemented.

Chapter Six

Other Kaizen Applications

Kaizen for Personal Development

Apart from the organizational theory of kaizen, there are wider applications of kaizen than that which is applied in the world of business. It is said that every individual has an instinctive desire to want to improve them one way or the other. Kaizen helps groom employees with the principles and tools for personal development. This encourages them to assess their lives against physical, spiritual, emotional and mental life criteria and to make suggestions for change where possible. Those who participate in this tend to work on plans that would involve small actions that would bring about improvement in their lives.

When a person begins to undergo kaizen practices, most of the habits they want to change are physical, some of which involve sleep, exercise and diet. Once these new habits are tried, they are then encouraged to work towards more of the emotional aspect of self-improvement. Any employee who signs up for the kaizen programs would notice a change in their habits and they become happier every day. Their exercise habits, nutritional habits and even rest would improve. They would even begin to demonstrate more sophisticated behaviors that are related to their emotional intelligence and also spiritual engagements. They also would develop a kaizen mindset in their personal lives and from this, they would benefit greatly in every other aspect of life.

It is said that change is infectious. When one has succeeded in one area, he or she would be pushed to apply the same techniques into the other areas of their lives. Kaizen's philosophy makes it easy for individual change in setting short-term, long-term and middle-term goals and to think of making incremental adjustments as they work towards achieving such goals. Once kaizen is adopted, the search for ways to be better in more areas than one would not stop. This is why it is encouraged that the adoption of the continuous improvement philosophy. While trying to change habits, you must understand that not all habits are negative or have negative effects on life. In other words, habits are not “inherently” negative. They are important to enable us to

function on a certain level every day. Our bad habits can be turned into good ones, one that would be used to keep us safe and comfort us whenever we feel tired and exhausted. The escape from the safety zone of our habits can be strenuous and because of this, we tend to go about our daily lives like we are some kind of robot.

You might ask why it is hard for one to change habits. Do you know that habits save us a lot of time and energy? When it comes to changing them, they may seem scary and daunting even though, normally, they are seductive. For there to be a change in habitual behaviors, the first step is to **educate you in order to know how we acquired such behavior in the first place.** The next thing to do is to tackle the habits by **identifying the cues that are for unwanted habits.** Apart from the identification of the cue for such habits, you must be conscious of the rewards, which are most times temporary that is gained from the behavior, how these rewards can influence the desire to repeat such behavior in the future and how such habits, if changed can give permanent rewards.

The next question you are likely to ask is **how long does this change take?** The length of time it takes for one person to reach that automaticity varies from that of another person. This simply depends on the person, the habits and the person's attitude towards change. For the transformation of habits, one has to acquire the new behavior through the continuous increase in the strength of the association between the person's situations in which the particular habit is performed. The more a habit is repeated in a situation, the more likely it is to become automated.

How Kaizen Can Affect Your Nutritional Habits

The application of kaizen techniques to your dietary habit can be very beneficial to those who really want to change in their relationship with food. Instead of restricting or removing the pleasure you have for food, try to make incremental changes to the way you consume food and drinks in order to create a positive attitude towards the fuelling of your body and mind. We would be looking at how can kaizen transform your dietary habits in three different term-goals; the short, medium and long term goals.

1. **Drink More Water:** The amount of water taken in every day should depend on your gender, what you eat, the number of exercise you do, and also the weather. It is alright to include milk, coffee, tea and sugar-free drinks, at the same time, drinking water. It is also sometimes difficult to remember to drink water but with the introduction of kaizen, it would become a routine and also very beneficial to the body. Do not forget to tune in to your thirst. Always remember to rehydrate. Do not over-hydrate as it can be dangerous to the body.
2. **Become vegan:** In this present day, there are lots of meat-eaters. Cutting down the amount of meat ingested in the body has a lot of definite health benefits. Kaizen is an excellent tool for such transition and it makes the change a gradual process. Eat more fruits and vegetables. This is being emphasized daily in the Japanese diet. It is a cheaper diet that includes all the nutrients that can be generated from all the other classes of food. Kaizen is a great approach to introducing fruits and vegetables into your diet. As a vegan, you **MUST** cut down on sugar. It is said that the consumption of sugar and soda drinks is very unhealthy. There is great emphasis on it. This does not mean you should cut down entirely on sugar because the fruits you would be eating as you begin the implementation of kaizen contains natural sugars. As it is a gradual process, you can begin to cut down on the amount of sugar you normally take till you achieve success. Do not eat cereals that contain hidden sugar. Cut down on adding sugar to hot drinks. Instead, try reducing the amount in small stages.
3. **Control your food portion:** This pertains to reducing the amount of food you eat. For the reduction of food portions, there are certain ways to go about it. You can begin by measuring your food, using small bowls, having no leftovers after cooking and dishing out, and observing hunger signals.
4. **Eat mindfully:** While eating, concentrate on every mouthful you eat, and master it. Try eating at a table with little or no distractions. Focus on the preparation of your meals.

The above-mentioned are short-term goals for the application of kaizen in your dietary habit.

For long-term goals;

You have to be mindful of the attitude you have towards what you eat, how they are prepared, and you should feel connected to how the food nourishes you. The change would happen gradually but ensure it fits with your previous routine so as to obtain a lasting difference. Whenever you reach certain milestones, track your progress, and reward yourself.

To lose weight and for better eating, there are some doable suggestions that can be shared by the managers to the employees of the organization. Some of them are;

- a. When in a restaurant, order the children's meal. The size of the food is always smaller than that of adult meals.
- b. People who eat lots of sweets tend to eat rather quickly without really tasting the food and enjoying it. Put down your spoon or fork after every bit. The slower you eat, the faster the satisfaction you would feel.
- c. Replace your habitual morning muffin, bagel or doughnut with toast or cereal. By so doing, you can lose about 20 pounds yearly.
- d. Without changing what you eat, drink more water daily. Let there be a bottle of water everywhere you go to remind you to always hydrate.
- e. It is said that one of the strongest determinants of fullness is psychological. So, in order to feel full with little food, put your food on a smaller plate, and ensure there are no leftovers.
- f. Before your meal is brought to the table, do not forget to tell the waiter to box up half of the food.
- g. To teach your brain new eating habits, try the mind sculpture exercises for every 10 seconds of every day. Imagine yourself in a restaurant, eating slowly, drinking lots of water, talking to a friend or dinner companion, and leaving some food on your plate. Add another exercise weekly. You would realize that without making much conscious effort, your food portions would reduce.
- h. If you are the kind of person that when upset, you eat, try other self-comforting experiments. Whenever you are sad or angry,

try writing a journal, drink lots of water. Exercise for about five minutes or less, breathe slowly or call a friend.

- i. Whenever you are going to a restaurant, take a plastic bag with you. Stash the bread in the bag when it comes and put it out of sight. It is said that bread causes weight gain.
- j. Two hormones are triggered whenever the body is deprived of sleep. They are the ghrelin and the leptin. They both affect the cravings of carbohydrate. Try going to bed a minute earlier than your normal time every night for a week. That minute should be used to perform slow breathing exercises. You can also use that minute to read something pleasant. After that week, try going to bed two minutes earlier than the previous week. Continue this pattern until you begin to feel active and less sleepy whenever you wake up in the morning.

Once you begin to feel motivated, you can try setting email reminders. The reminders can be to increase your intake of fruits and vegetables, to increase physical activities and exercises, to reduce the intake of saturated fats and sugar, etc. They can also contain small suggestions like taking a walk during your breaks at the office, ordering a salad with chicken for lunch, etc.

As a manager, rather than just talking to your employees on health behaviors, led by example. You can take the stairs instead of the elevator or escalator, work on your food portion control, have healthy snacks on your desk, and also you can place a healthy chart on your wall that would reflect your daily healthy steps.

In order to burn additional calories, here are a few suggestions;

- a. Walk up and down the stairs or the escalator.
- b. Do up to five pushups or more daily for one week. You can add one more every day.
- c. While working, take a break after every 90 minutes of work. Spend five minutes strolling through the office or stretching.
- d. When talking on the phone, stand or pace, or when thinking through a problem.
- e. When traveling with luggage that has wheels, pick it up part of the time.

Studying and Kaizen

For the implementation of kaizen, while studying, there are certain habits that can be hugely beneficial to you.

1. **Find out how best you work.** There are different study techniques that work better for every individual. Some people prefer writing out everything in the textbook and then re-reading to memorize. Other people remember information like pictures in their minds. Some people have to re-write every point as many times as possible until it sticks. It is best you discover what works for you instead of trying to copy the techniques of others. It may be that you like working or studying in silence, or you like listening to cool music while you do so, or better still, you like listening to hardcore songs. With all these, the next thing is to build a study routine around the best way you can maximize your energy and time.
2. **Manage your time effectively.** Some people can sit in a library for a very long time, say for 14 hours without losing their minds. Others cannot. So, for the rest of us, it is preferable you take regular breaks or work in smaller bursts so as to be effective. Try to find out if you are more productive in the early hours of the morning, at noon or at night and try to fit your routine around the time.
3. **Take breaks when necessary.** There is a saying that the body is not firewood. That saying brought about the taking of short breaks every hour. During that time, you can take a walk, hydrate yourself, or eat a fruit. All these work wonders for both concentration and motivation.
4. **Set priorities.** Before priorities can be set, you must first acknowledge your weaknesses and put more focus on them.
5. **Keep track of every page number or reference.**
6. **Try studying in a stimulating space.**
7. **Have a goal, and keep it in mind.**
8. **Track your progress.**
9. **Plan your day.**
- 10.

hen everything is over, reward yourself.

How to Use Kaizen to Improve Sleep

The first thing to take note of is your sleep environment. Your bedroom should be a calm and clean environment, rid of clutter, and any form of interruptions. This is a major key to good sleep. Once one change has been adopted, try to see if another would make more difference than the first.

To improve your sleep;

- a. **Remove clutter from your room.**
- b. **Change your bedsheets at least every fortnight.**
- c. **Get rid of every external noise.**
- d. **Play relaxing music at a low volume while attempting to sleep.**
- e. **Shut out the lights in order to make your room dark and cool.**
- f. **Surround yourself with pleasant smells.**
- g. **Turn off your phone and block out every form of communication.**
- h. **Read a book.**
- i. **Be kind to yourself.**

For times when sleep is not forthcoming, try performing some breathing exercises. They would help you have a calm mind and also help you sleep.

Below is an easy exercise that can be done anywhere and is very effective for the promotion of sleep;

- a. Maintain any position that seems comfortable for you. It might be sitting upright or lying down.
- b. Relax with your eyes closed. Imagine your eyeballs, swimming in a cool pool of water.
- c. Close the left nostril with your left thumb and rest the second and third fingers of the same hand in the palm, extending the fourth and fifth fingers.

- d. Breathe in through the right nostril and then close it with the fourth finger of the left and, at the same time releasing the thumb from the left nostril and breathing out through it.
- e. Regulate your breathing and repeat the action for some minutes until your breathing is slow and relaxed.
- f. With this action, your brain would feel less wrung up, and you might fall asleep.
- g. Perform the same action with the right hand and the right nostril.

Kaizen techniques can be used to form good morning habits. They are as follows;

- a. Get out of bed five minutes earlier than usual.
- b. Get rid of things that are sources of stress in your morning routine. Try deciding on something that would help eliminate that source of stress.
- c. Perform early morning exercises.
- d. Practice breathing exercises, immediately you wake up. You will observe a sense of calmness during the day.
- e. Hydrate yourself. Let it be the first thing you do immediately after your breathing exercises.
- f. Make time for breakfast.

As mentioned at the beginning of the book, there are three (3) Japanese style Zen practices that help bring joy and order to one's life. As it is, Zen is not exactly a Japanese invention. It was first originated with the practice of Zen Buddhism, which came to Japan through China.

Kaizen can help improve one's productivity. How can this be done?

- a. Determine where time and energy is wasted by tracking your daily activities, downtime, and interruptions for one week and remove unnecessary time wasters. Try evaluating whether the routine tasks to be accomplished can be made efficient by applying the standardization techniques.
- b. Begin with small tasks, making it easier for the stress levels to be broken down into smaller, yet manageable parts.

- c. Try evaluating the things that work for you and those that do not. Pay more attention to things you can improve.

Chapter Seven

Extras

The Pareto (80/20) Principle

This Pareto principle should be used by every individual in their daily lives, by every enterprise or organization and by every form of society. It helps in the achievement of much more with little effort. It can improve happiness and the personal effectiveness of any individual. This principle holds the key to increase both quality and quantity of services and products offered in any organization at the same time, reducing cost.

How does one explain the 80/20 principle? It means, in Layman's terms, that 80% of whatever is achieved in any job comes from the 20% of time spent on it. It also means that 80% of consequences flow from 20% of the causes of it. It can mean 80% of something, caused by 20% of another thing in every area of life, especially in business.

This principle was discovered more than 100 years ago by an Italian economist named Vilfredo Pareto. His discovery has gone by many names over time; the Pareto law, the Pareto principle, the 80/20 rule, the Principle of Imbalance, and the Principle of Least Effort.

Definition of the Pareto Principle

This simply states that there is an imbalance between inputs and outputs, effort and reward, and causes and results. This is divided into two (2) categories; the majority and the minority.

The Importance of the Pareto Principle

The reason why this principle is so important is that it is counterintuitive. Every cause has almost the same significance. Every customer is valuable, and every business enterprise is as good as the other.

How does the Pareto Principle work?

This method uses the possible existence of the 80/20 relationship as a hypothesis, and the facts are then gathered, so the true relationship is

revealed. This can also be referred to as 80/20 Thinking. This form of thinking does not require the collection of data or to test the hypothesis. What it requires of you is to think deeply about any issue that might be important to you, and it then asks you to judge whether such a principle is effective in that area. This form of thinking is more accessible and is less likely to mislead you.

Why is this Pareto Principle necessary?

It is necessary for behavior change, and to concentrate on the most important 20%. This principle has no boundaries. It is the best-kept business secret. This is the reason why it is used during kaizen training. It works in business to generate more money with less effort and expenditure of assets.

Wabi-sabi

The other Zen practice, which is wabi-sabi, is quite difficult to translate. It simply refers to the simplicity, humility, and being attuned with nature and also appreciating its anomalies and quirks. Sabi is about accepting the beauty, passage of time, and life's imperfection. Wabi-sabi is a concept that is encountered during the design or decoration of a home. This trend is rooted in Zen Buddhism.

Wabi-sabi, an ancient approach to life which breaths in a new meaning to the decorative and visual arts, is directed towards the modern Western culture, which prefers the philosophy and design characters, more consistent with organic nature and its flaws. Its consistency between design and philosophy principles means that the message relayed by wabi-sabi is of great relevance to the many aspects of modern life.

There are four (4) principles of wabi-sabi, and they are as follows;

- a. The art of wabi-sabi is able to suggest and embody this essential cliché of impermanence.
- b. Everything in the universe is changing continuously, whether it is coming from or returning to nothing.
- c. Experiencing the expressions of wabi-sabi can give rise to peaceful contemplation of the transience of things.

- d. By appreciating the transience of things, a new perspective can be brought upon our individual lives.

Characteristics of Wabi-sabi

- a. Roughness
- b. Authenticity
- c. Modesty
- d. Asymmetry
- e. Intimacy
- f. Economy
- g. Simplicity
- h. Appreciation of the integrity of processes and natural objects.

This Zen can be applied to the lifestyle of an individual. For one to improve, you must first embrace the emptiness and the solitude to rejuvenate and inspire self. Try to anchor yourself in nature and the moods, openness, and authentic colors of nature.

This brings us to the third Zen, ikigai.

What is Ikigai?

It is a Japanese term which is a combination of symbols representing life, and life being worthwhile. This simply translates to “the happiness of always being busy.” It has been proven that the ikigai of one person is different from the ikigai of the rest of us. Our ikigai is within us, hidden, and for it to be found, it would require patience during the search. Once it has eventually been found, you must nurture it, pursue it, and it would bring meaning to your life daily. Ikigai is of great importance in our lives. Anyone with a clearly defined ikigai pursues their passion no matter the obstacles on the way.

Rules of Ikigai

There are certain rules that everyone must abide by. These rules are slightly similar to the wabi-sabi rules. They are as follows;

- a. Always stay active. Do not retire.
- b. Take things slow and steady.
- c. Do not fill your stomach until you pass your limit.

- d. Always stay connected with good friends.
- e. Stay in shape always.
- f. Share a connection with nature.
- g. Learn to live in the moment every day.
- h. Be thankful.
- i. Always pursue your ikigai.

Apart from the rules of happiness, there are certain things that can be added up for longer and happier life.

1. **Youthful body and an active mind:** Having a sound mind and a sound body gives you an insight into how important the mind and body are, as it is said that the health of one is solely connected to the health of the other. Having an active mind is one of the major factors of staying young. It drives one towards a healthy lifestyle, and this would slow the aging process of such an individual. Giving an instance, as lack of physical exercise has negative effects on the body, so it the lack of mental exercise. It leads to the deterioration of the neurons and their connections in the brain, and this would result in the inability to react to one's surroundings. The neurons in the brain begin to deteriorate when one has reached his or her twenties, but this process can be slowed by curiosity, a desire to learn, and intellectual activity. This is the reason why it is very important to perform brain workouts.

Research has it that stress is the reason why people age prematurely. During periods of crisis, the body wears down faster. It has also been proven that stress is a major cause of most health problems. Stress is said to be a natural response to information received by the body as a problem or a potentially dangerous bodily effect. How do we humans feel stressed? The fact that the body is overworked is enough to cause a human to be stressed; not eating right and not exercising too can cause the body to be stressed; the brain can be stressed when it is at high alert, in anticipation for something to come, etc.

Over time, stress has a degenerative effect. Its secondary effects are anxiety, insomnia, irritability, and high blood pressure. It also highly psychosomatic, thereby affecting the entire system, majorly from the

digestive system to the layers of the skin. This is the reason why it is important to prevent stress from taking its toll on you. As there is bad stress, there is good stress. The bad stress is otherwise known as intense stress. This is the form of stress that is an enemy of mental and physical health, and an enemy of longevity. Good stress is the low level of stress. It is said that a small dose of stress brings great positivity to the body. People who live with low levels of stress develop healthier habits, drink less alcohol, and smoke less. All these would also lead to effectiveness in the workplace.



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