



Lean Introduction

Your **FREE** introduction
to Continuous Improvement
by Leankaizen Ltd



**More Value
With less
Waste**



By **Graham Ross**

www.leankaizen.co.uk





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Making It Happen

When we first started to learn about kaizen and all the benefits it can give people we had one clear intention. We wanted to eventually be able to teach others how to do it to. We didn't want to be one of those "Consultancies" who came in and wrote a report telling you what you already know. We wanted to make sure that people "actually got it" and were eventually able to do it for themselves.

Steadily that intention is being realized as we see people that we've coached having major positive impacts in their Organisations. As we keep saying in our training seminars "it's all about people" and getting them engaged.

Since 2001 we've been helping people in Organisations to run successful kaizen blitz events where we make a big impact in a short space of time – usually 1 week.

This e-report serves as a condensed version of our Leankaizen Awareness Workshop and is worth reading because it will help you get started on your lean journey.

All the best

Regards

Graham Ross, Managing Director, Leankaizen Ltd



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Introduction

Kaizen – an introduction

Kaizen is a method of applying some straightforward improvement techniques to tasks, processes and systems. It involves the people that do the work, to seek improvements and eliminate waste.

Although it started, at the Toyota Motor Corporation, in Japan, it is increasingly being picked up by UK organisations, in the public sector.

One of the appeals of kaizen is that is not about spending lots of money but about making improvements by doing things smarter.

It's about eliminating tasks that are a complete waste of staff's time and which don't add any value to customers.

Kaizen creates an improved office environment where we don't waste time constantly having to look for items.

At the end of the day Kaizen is all about people engaging.

80% of all improvements are about having the right attitude and having the fire in your belly to actually make a difference.

Some basic Kaizen Concepts

Kaizen explained – the rest of this e-report covers some of the basic concepts around kaizen and defines many of the terms that are used when applying the principles.

Lean - When we talk about an Organisation getting "lean" we are talking about growing the business and becoming very successful with the minimum amount or resources. This is often counter intuitive for people as they often think as "lean" as being associated with being "mean". Lean if you like is a vision of **"how we would like it to be"**.



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Kaizen - kai - literally means "change" and zen means "for the better". So kaizen literally means, change for the better, or continuous improvement. It's all about changing your culture to one that is always thinking about how you can improve ways of doing things. Kaizen uses a structured approach with predictable outcomes. It is a business philosophy advocating the need for continuous improvement in a person's personal and professional life. Kaizen is if you like **"how we are going to get there"**.

Quick bit of history - Henry Ford was one of the first people to really think about Business as a process and many people credit him as being the first practitioner of "lean" thinking.

In 1929 Henry Ford was visited by a Japanese industrialist called Kiichiro Toyoda and they became good friends. Kiichiro founded the Toyota Motor Company in 1937 and became its first President. He is credited with developing the principle of "Just in Time". Taiichi Ohno who worked for Toyota then developed the blueprint for kaizen thinking called the "Toyota Production System". It had the following key themes:

- 1) Produce only what the market wants
- 2) Use visual aids to highlight where action is needed
- 3) Use small batch sizes

Most of the basic kaizen ideas were initially developed in Japan by Toyota. These ideas have now been adapted to suit different cultures and work environments and are now being used by many well known Organisations in the Public Sector.



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Lead Time or turnaround time - The lead time is the time it takes from a customer requesting something to us satisfying that request e.g. If staff in an office dealt with some sort of application form, it would be the time it takes from them receiving the application form to sending out their response.

One of our primary goals when using the kaizen approach is to strip out wasted time and so reduce the lead time or turnaround time.

Quality, Cost, Delivery in the context of time-Our processes need to work right first time. Imagine what it would be like if your process worked every time? Wouldn't that be brilliant. That's what we are aiming for. Never passing on an error at all stages of our process. The longer it takes us to provide our service the more it costs. Shortening our turnaround times is a primary driver for all of our kaizen activity. Delivering our services on time as promised consistently is also important. When we fail to deliver to our service level agreements, all we get are "failure" telephone calls, and letters of complaints. Dealing with these eats away at the very resources we should be using to "add value" for our customers. When we talk about Quality, Cost and Delivery we need to think of them in the context of time. Think about time as being our "common currency".



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Defining Value One of the first things we need to do when applying kaizen is to think about where and when we add value for our customers. Physically walking through your process from beginning to end can be a very illuminating experience. You should try it some time. It will reveal all sorts of waste that you never realised existed.

In the kaizen methodology there are 3 terms worth defining when we talk about value.

- 1) **Value adding activities** – These activities transform information into services that clients require.
- 2) **Necessary non Value adding activities** - These activities consume resources, do not create any value for the customer, but are still currently necessary to supply our service.
- 3) **Non Value adding activities** – These activities consume resources, but do not create **any** value whatsoever for our customers.

Muda - Muda is the Japanese word for "wasted time" .e.g. having to put work on a trolley and go up three floors to deliver it to the next stage of the process. One of our primary activities when running a Leankaizen Blitz workshop is to seek out and have fun destroying Muda from our business processes.



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Getting Lean – To become successful and grow our Organisation there are several things that we need to make happen. Many of these are focused around eliminating wasted time from our business processes.

1. Eliminate Wasted Time

There are 7 main types of waste that we are trying to eliminate from our business processes. Tim Wood is a handy little acronym for the 7 classic types of wastes that exist in most businesses.

Let's go through them:-

T is for Transport Waste

Movement of paperwork in an office environment is a waste. We need to minimise the amount of movement by ensuring that all processes are on the same floor, in an open plan environment, and definitely in the same building!

I is for Inventory Waste

We need to have enough inventory of work in our system to keep things moving along, but not so much that it reduces flow and masks problems. By aiming for information to move through our office "just in time" we minimise the potential for error and help reduce costs.



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M is for Motion Waste

It goes without saying that we need to move our bodies to remain healthy. We should be getting up and away from our P.C. screens at least once an hour. The waste we are talking about here is "excess" motion e.g. unnecessary key strokes where shortcuts could be used; having to get up and down so someone else can check your work. etc.

W is for Waiting Waste

We need to minimise "waiting" time. e.g. waiting for information from someone else ;waiting for a computer screen to refresh; waiting for an approval; waiting to use the photo copier or fax machine.

O is for Overproducing Waste

We should always aim to only produce what the next process requires. i.e. the previous process should "pull" work from us, rather than us "pushing" work onto them. The overall process can only go as fast as the slowest process. ("Theory of Constraints")

By not overproducing we reduce the amount of inventory of work in the pipeline and thus improve turnaround times.



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O is for Over processing Waste

Over processing occurs when we do something unnecessary that is not required by our customers. e.g. putting a document in a plastic wallet and then putting 10 plastic wallets together with a rubber band and then putting the 10 plastic wallets in a crate to transport to the next department 3 floors away. If the next process was co-located you could just hand over individual documents one at a time!

D is for Defect Waste

By reducing the number of errors, we reduce the amount of rework, which in turn reduces our costs and our turnaround times. How often has work flowed through your office without stopping for some sort of error? (e.g. incorrect data, missing information) Very few offices do proper analysis of the defects that are preventing flow. Once the chronic few are identified you need to do something about them.

Backlog covers the wastes? In many instances we have backlogs of work in our business processes. Backlogs are a symptom of a process that has **lots of waste.**



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2. Create flow – We organise our Offices so that that the work physically flows through in the optimum sequence. Work should flow a bit like water flowing down a pipe. By creating flow we minimise travel and movement.

3. Create Pull Systems – We create a pull system where we request work from the previous process by some form of signal or “kanban”. To be optimal we should be pulling work through the process based on our average customer demand. The ultimate is to pull one piece of work at a time. We want to avoid pushing work onto the next process in large batches. Large batches lead to increased lead time.

4. Get things right first time – We need to develop an environment where we never pass on defective information to the next part of the administrative process. We need to create a process where we have no delays or rework caused by imperfect information. To ensure quality improvement we need to immediately respond to abnormalities. We should give staff “stop” the process authority when errors do occur. We then need to investigate the root cause and develop counter measures to ensure that the error never re-occurs.

5. Workload Smoothing We need to determine the average demand for our service and then set up our processes to be able to deal with that demand every day through each stage of the process .i.e. establish a beat rate with all departments synchronised.



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6. Create standards

Where there are no standards you can be sure that waste is rife in your organisation. One of the things we strive for under the kaizen banner is finding the "best known way" of doing something.

By getting people together and discussing and experimenting with the different way they do things we can draw on all of their experience and ingenuity to come up with a streamlined more efficient process.

Standard work is a step by step description of an activity including times and information required to conduct a task. It is the "best known way" of performing a particular task. It serves as a basic level of acceptable performance for a task and can help support training of staff. Why create Standards? To minimize and control the **variation** in:

- Output
- Cost
- Amount of Information in Process
- Errors

Taiichi Ohno, stated "Where there is no standard there can be no kaizen" In other words if we don't have a consistent approach to how we do things how can we ever hope to improve.



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7. Do things Just in Time Ultimately we are trying to create a system that delivers: What the customer wants, in the correct quantity, when the customer wants it while using minimal resources. A just in time system has the following characteristics.

- Functions in order of process
- One piece information flow paced to customer demand
- Multi- skilling
- Standard operations defined

A JIT system is intolerant of abnormality

As a result the system helps us to

- Minimize waste in the process
- Free up resources
- Reduce excess process steps
- Reduce turnaround times

Kanban- Kanban literally means "signal" and it is a primary element of creating a pull system. A Kanban can take many forms but its main aim is to visually indicate that it is time to pull work from the previous process. A bit like a petrol gauge on a car tells you when it's time to fill up your tank. The ultimate in "kaizen" is to pull one piece of work at a time. Often geography and layout prevents us from achieving this goal due to lack of kaizen thinking at the initial Office design phase.

One Piece Flow - Where a piece of work flows through the end to end process one item at a time.



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5 Why's – Ask why 5 times This can be a very powerful tool when getting to the root cause of a problem. The 5 Why's technique originated at Toyota as a means of getting to the root cause of a problem. The 5 Why's is so called because the technique involves you asking why 5 times. Obviously you can ask why more or less than 5 times. It's not set in stone. The general idea is to keep drilling down by asking why till you get to the true cause of the issue that you are investigating.

Poka Yoke - Poka means an inadvertent error and yokeru means to avoid. One of the main themes of kaizen is to never pass on an error to the next stage of the process. Poka Yoke is used to prevent the movement of incorrect information to the next process using fail safe techniques to eliminate errors.

A poka yoke is something that we put in place to prevent us from making mistakes. An example would be say at data entry. Say you had to enter a 10 digit code. The poka yoke may be that if you only entered 9 digits then the computer system would come back to indicate that you had not provided the correct information. Poka Yokes work best for chronic errors that occur on a frequent basis

Takt Time -Takt is a German word that literally means the beat rate of an orchestra. Takt Time is the time available to provide the service divided by the customer requirement for that same time period. Takt Time is the beat rate that all parts of your end to end process should be achieving to meet average customer demand for your service. It is the rate at which we should be creating "one" item. The Takt time can obviously vary over time depending on the seasonality of your service.



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Leankaizen Methodology Create the Vision, Plan Activities, Organize blitz events, Follow through, Sustain the gains, Identify new Challenges

Kaizen Blitz - At the heart of the Leankaizen methodology is people working as a team to improve the workplace. It is amazing what a motivated team of people can achieve in a favourable environment. The Kaizen Blitz is a bit like the “extreme makeover” of continuous improvement. It is a planned facilitated structured event held over 3-5 working days. A blitz event is usually organised to support an overarching goal for the business and has a detailed scope and objective. It is the main driver of the kaizen approach to improvement

Kaizen Newspaper The kaizen newspaper is used to assign improvement activities to individual, sub team or team members. It is a tool to help us keep track of activities and their level of completion. It creates action quickly and helps to keep up team momentum during blitz events

Pareto - In 1897 an Italian economist called Alfredo Pareto discovered that 80% of the wealth in his country was owned by 20% of the population. In the 1930's and 40's Dr Edward Juran, a management guru, was doing a lot of ground breaking work on Quality improvement. During that period he came up with the idea of “the vital few, and the trivial many” and accredited this idea back to Alfredo Pareto.

Hence the Pareto Principle or 80:20 rule was born.

In a nutshell what the principles say is that in many instances 20% of ones efforts account for 80% of your results.



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Pareto (continued)

In the same vein Peter F. Drucker, the writer, management consultant and university professor came up with some similar thoughts and expressed them as follows.

“There is nothing so useless as doing efficiently that which should not be done at all.”

So if we can identify the “vital few” things that have the biggest impact then we can use our time and effort far more effectively.

Pareto analysis or the 80/20 rule has become a tried and tested tool. Identifying the 20% of things that are really important can have many benefits in terms of deciding where to concentrate our improvement efforts. It's not just important to work smarter, it's important to work smarter on the right things.

Spaghetti Diagram – A spaghetti diagram is a way of representing your business process as a 2 dimensional diagram. It is called a Spaghetti diagram because the results typically looks like a bowl of spaghetti. It is used to help determine the physical flow and distance that information and people travel to process customer files. The spaghetti diagram helps us to “see” processes and procedures in a different way. The spaghetti diagram can very often help you see waste that you didn't even realise existed.



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3S – Workplace Organisation

3S is a process and method for creating and maintaining an organised, clean, high performance office environment. 3s helps you determine what things in the office are needed and where they are needed. The 3S technique is **intolerant of waste** and helps you create an environment where items are easier to find. 3S helps us to develop a physical orderliness that makes **abnormality** jump out.

The 3S are as follows:

Sort Separating what is needed from what is not

Straighten Organising the way needed things are kept so that anyone can find them easily

Sustain Audit first 2S's regularly to make the improvements unbreakable, identify sources of abnormality, and then make further Improvements to the office environment.

Red Tags - Red Tags are used as part of the 3S Workplace Organisation Process .We use red tags to identify items that are either no longer required or are not properly stored. Red tagging an office can eliminate lots of clutter and is a step towards making things easier to find. It can also help free up valuable office space.



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Process Mapping Process Mapping or what some people call "Value Stream Mapping" is a method for depicting a process, material or information flow in a diagrammatic form. It gives a logical step by step representation of a business process.

It is a method to identify who does what over time by identifying the key steps in a process. It is a powerful method for identifying value adding and non value adding activities. Process mapping helps identify waste that is often not even recognised as such e.g.

- Creating more information than the customer or the next office process actually needs
- Creating reports that no one needs
- Transporting files around the office or to other buildings
- Searching for information
- Waiting for faxes, information systems
- Waiting for hand off files to be returned
- Duplication of data entry
- Files waiting to be read
- Having to review in appropriate e-mails

Process Mapping can be used at any time to gain clarity and understanding of your current condition. In general Process Mapping is best used when you want to move from your current state to an improved future state.



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This is the end of the e-report

I hope you found this introduction to kaizen useful and that it may inspire you to start thinking about applying the kaizen methodology to your business.

If you have any feedback or questions for me, Graham Ross, please feel free to call me on 01698308309 or contact me via the website contact page at http://www.leankaizen.co.uk/Contact_Us.html

I wish you all the best in your improvement efforts.

Graham Ross, Managing Director, Leankaizen Ltd