

SELF-PACED COURSE · STUDY HANDBOOK

Kaizen: Continuous Improvement

Better every day — by everyone, everywhere.

Kaizen philosophy and tools (PDCA, 5 Why, fishbone, A3, kaizen events, standard work) and the ERP's scored Kaizen system assessment (KZ-1 to KZ-7, rated 0 to 4).

5 h study time **6** modules Level: **Foundation** Pass mark: **70%**

AuditCert International

ABOUT THIS COURSE

How to use this handbook

Who it is for: Team members, supervisors, engineers, managers and improvement coordinators in manufacturing, services and offices.

You will be able to

- Explain the kaizen mindset and how it differs from big one-off innovation
- See waste using muda, mura, muri and the eight wastes
- Solve problems with PDCA, 5 Why, fishbone and the A3 report
- Run a suggestion system and daily kaizen that get fast results
- Plan, run and follow up a kaizen event
- Standardize, measure and assess a kaizen system the way our assessors do

How you pass

- Study each module and pass its knowledge check (3 of 4 correct).
- Complete the Kaizen audit self-check on your own workplace.
- Score 70% or more on the 20-question final exam.
- Submit the practical assignment (graded by your trainer, pass 60/100).

Contents

Module 1: The kaizen mindset	35 min
Module 2: Seeing waste: muda, mura, muri	40 min
Module 3: PDCA and problem solving	55 min
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Module 5: Kaizen events (kaizen blitz)	45 min
Module 6: Standardize, sustain and measure	45 min
Audit self-check checklist	
Practical assignment	
Glossary and answer key	

MODULE 1 OF 6 · 35 MIN

The kaizen mindset

What kaizen means, where it came from, and the principles that make it work.

Auditor checks: `KZ-1`

What is kaizen?

Kaizen (改善) is Japanese for **"change for the better"**. In business it means **continuous improvement through many small steps, by everyone, every day**. The idea was made famous worldwide by **Masaaki Imai's 1986 book *Kaizen: The Key to Japan's Competitive Success*** and is central to the Toyota Production System.

Kaizen vs. innovation

Kaizen	Innovation
Small, frequent steps	Big, occasional leaps
Everyone involved	Specialists or experts
Low cost — uses ideas and effort	High cost — uses capital and technology
Process-oriented	Result-oriented
Keeps improving after the change	Often declines after the change unless maintained

Both are needed: innovation lifts performance in a jump, kaizen keeps lifting it and stops it sliding back.

Core principles

1. **Go to the gemba** — the real place, see the real thing, get the real facts (*gemba, gembutsu, genjitsu*).
2. **Respect for people** — those who do the work know it best; improve the process, don't blame the person.
3. **No problem is a problem** — hidden problems cannot be fixed; make them visible.
4. **Data, not opinions** — measure before and after.
5. **Standardize, then improve** — you cannot improve a process that changes every time.
6. **Small and fast beats big and slow** — do it today, not next quarter.

A kaizen system needs management

Kaizen does not happen by slogans. It needs **top management support, a policy, roles (a kaizen coordinator, team leaders), time and a small budget**, and a regular review.

> **Assessor question KZ-1:** *Is there a defined kaizen system (policy, roles, coordinator, budget) supported by top management?*

Key points

- Kaizen = change for the better, small steps, everyone, every day
- Complements innovation
- Gemba, respect for people, make problems visible, use data
- Standardize then improve
- Needs policy, roles, coordinator, budget

Knowledge check

1. Kaizen literally means...

A. Zero defects
B. Change for the better
C. Just in time
D. Big investment

2. Which is typical of kaizen rather than innovation?

A. Large capital spend
B. Only experts involved
C. Small, frequent improvements by everyone
D. Once every five years

3. What does 'go to the gemba' mean?

A. Read reports
B. Go to the real place where the work happens
C. Hold a meeting
D. Send an email

4. When a mistake happens, the kaizen approach is to...

A. Hide it
B. Improve the process that allowed it
C. Blame the operator
D. Fire the supervisor

Answers are in the answer key at the back.

MODULE 2 OF 6 · 40 MIN

Seeing waste: muda, mura, muri

Learn to see waste — the raw material of every kaizen.

Auditor checks: KZ-3

Three enemies of good work

Term	Meaning	Example
Muda	**Waste** — activity that adds no value for the customer	Walking to fetch parts
Mura	**Unevenness** — irregular workload or flow	Rush at month-end, idle at month-start
Muri	**Overburden** — pushing people or machines beyond capacity	Lifting 40 kg bundles; running a machine without maintenance

Mura and muri often **cause** muda, so levelling the work and removing overburden is part of kaizen.

The eight wastes — remember DOWNTIME

Letter	Waste	Shop-floor example	Office example
D	**Defects**	Rework, rejects	Wrong invoice
O	**Over-production**	Making more than ordered	Printing reports nobody reads
W	**Waiting**	Operator waits for material	Waiting for approval
N	**Non-utilized talent**	Ideas of operators ignored	Skilled staff doing data entry
T	**Transportation**	Moving goods between buildings	Emailing files back and forth
I	**Inventory**	Piles of WIP	Unprocessed inbox
M	**Motion**	Bending, reaching, searching	Searching for files
E	**Extra-processing**	Polishing hidden surfaces	Re-typing data into two systems

Value-added or not?

An activity **adds value** only if: the **customer cares** about it, it **changes** the product or service, and it is **done right the first time**. Typically only a small share of lead time is value-added — the rest is the opportunity.

The waste walk

Take a notebook and walk the process at the gemba for 30 minutes. Write down every waste you see, by DOWNTIME letter. Don't fix yet — just **learn to see**.

Garment example: a sewing line moved bundles across the floor three times between operations. Re-arranging the line into a U-shape removed most of the transport and cut WIP in half.

Key points

- Muda = waste, Mura = unevenness, Muri = overburden
- DOWNTIME: Defects, Over-production, Waiting, Non-utilized talent, Transport, Inventory, Motion, Extra-processing
- Value-added: customer cares, it changes the product, right first time
- Waste walk: see before you fix

Knowledge check

1. An operator walks 20 metres to fetch screws each hour. Which waste?

A. Inventory
B. Defects
C. Motion
D. Over-production

2. 'Mura' means...

A. Waste
B. Improvement
C. Unevenness
D. Overburden

3. Making 1,200 pieces when the order is 1,000 is...

A. Defects
B. Talent
C. Over-production
D. Waiting

4. Which activity is value-added?

A. Waiting for approval
B. Sewing the seam the customer pays for
C. Inspecting for defects
D. Moving parts to the store

Answers are in the answer key at the back.

MODULE 3 OF 6 · 55 MIN

PDCA and problem solving

The structured method behind every kaizen: PDCA, 5 Why, fishbone and the A3 report.

Auditor checks: `KZ-3`

PDCA — the engine of kaizen

The **Plan–Do–Check–Act** cycle (from Shewhart and Deming) turns ideas into proven improvements.

Step	What you do
Plan	Define the problem with data, find the root cause, choose countermeasures, set a target
Do	Try the countermeasure — small scale first
Check	Measure results against the target and the baseline
Act	If it works, **standardize** it; if not, learn and go round again

Define the problem well

A good problem statement is **specific and measured**: *"Stitching rejects on Line 4 rose from 2 % to 6 % in May"* — not *"quality is bad"*.

5 Why — find the root cause

Ask "Why?" until you reach a cause you can fix that will stop the problem coming back.

1. Why did the machine stop? → The fuse blew.
2. Why did the fuse blow? → The motor overloaded.
3. Why did it overload? → The bearing was not lubricated enough.
4. Why not? → The lubrication pump was not pumping enough.
5. Why not? → The pump intake was clogged with metal chips. **→ Root cause: no strainer on the intake.** Countermeasure: fit a strainer and add it to the maintenance checklist.

Fishbone (Ishikawa) diagram — 6M

Brainstorm possible causes under six headings: **Man (people), Machine, Method, Material, Measurement, Mother nature (environment)**. Then test the likely causes with data.

The A3 report

One A3 sheet tells the whole improvement story: **Background → Current condition (data) → Target → Root cause analysis → Countermeasures → Plan (who, what, when) → Results → Follow-up / standardize.** The A3 is also a coaching tool: a manager reviewing it asks questions instead of giving answers.

Assessor question KZ-3: *Is a structured method used (PDCA, A3, 5 Why, fishbone) and documented for each improvement?*

Key points

- PDCA: Plan, Do, Check, Act — then standardize
- Specific, measured problem statements
- 5 Why to the fixable root cause
- Fishbone 6M: Man, Machine, Method, Material, Measurement, Mother nature
- A3 tells the full story on one page

Knowledge check

1. In PDCA, what happens in 'Act' if the countermeasure worked?

A. Reverse it
B. Start a new unrelated project
C. Forget about it
D. Standardize it so it becomes the new way

2. Which is the best problem statement?

A. Rejects on Line 4 rose from 2 % to 6 % in May
B. We need a new machine
C. Workers are careless
D. Quality is poor

3. The 6M categories of a fishbone include…

A. Six managers
B. Money, Marketing, Media
C. Monday to Saturday
D. Man, Machine, Method, Material, Measurement, Mother nature

4. When do you stop asking 'Why?'

A. When someone is blamed
B. When you reach a cause you can fix that stops recurrence
C. After 2
D. Always after exactly 5

Answers are in the answer key at the back.

MODULE 4 OF 6 · 40 MIN

Suggestion systems and daily kaizen

Turn every employee's ideas into quick, visible improvements.

Auditor checks: `KZ-2` `KZ-7`

Why ideas from everyone?

The people who do the work every day see problems first. A good suggestion system turns that knowledge into hundreds of small improvements a year.

What a good idea system looks like

1. **Easy to submit:** a simple one-page kaizen card or a phone form, in the local language.
2. **Fast response:** the supervisor responds **within days** (for example within 48 hours to acknowledge, 2 weeks to decide).
3. **Do it yourself first:** most ideas should be implemented by the person or team who proposed them, with supervisor support.
4. **Visible:** an idea board shows ideas *submitted → approved → in progress → done*.
5. **Recognize, don't just reward:** thank people publicly; small awards for the best ideas of the month. Recognition of participation matters more than big cash prizes.
6. **Track:** ideas per employee per year, % implemented, average response time.

The quick kaizen sheet (before / after)

Section	Content
Title and area	"Thread cones within reach — Line 2"
Before	Photo + problem + measure (e.g., 12 s reaching per bundle)
After	Photo + what changed + measure (3 s)
Benefit	Time, cost, quality, safety or morale
Who and when	Names and date

Daily kaizen

- **Daily stand-up at the board** (10 minutes): yesterday's results, today's problems, ideas in progress.
- **Supervisor's question each day:** *"What small thing can we make better today?"*

> **Assessor questions:** *KZ-2 — Is there an idea / suggestion scheme open to all employees with fast evaluation and feedback? KZ-7 — Is participation high (ideas per employee, share of staff involved) and are contributions recognized?*

Key points

- Simple submission, fast response
- Implement by the proposer where possible
- Idea board makes progress visible
- Recognition and participation over big rewards
- Track ideas/employee, % implemented, response time

Knowledge check

1. What kills a suggestion system fastest?

A. Recognition
B. Ideas waiting months with no response
C. Fast feedback
D. Simple forms

2. Who should normally implement a small idea?

A. An outside consultant
B. Nobody
C. The person or team who proposed it, with support
D. Top management only

3. Which metric shows participation?

A. Machine speed
B. Ideas per employee per year
C. Overtime hours
D. Total sales

4. What should a quick kaizen sheet always include?

A. Only the title
B. Before and after, with measures
C. The proposer's salary
D. A budget request

Answers are in the answer key at the back.

MODULE 5 OF 6 · 45 MIN

Kaizen events (kaizen blitz)

A focused 3–5 day team event to make a big improvement fast — and make it stick.

Auditor checks: KZ-4

What is a kaizen event?

A **kaizen event** (or blitz) is a short, intensive team effort — usually **3 to 5 days** — to improve one specific process. The team stops normal work, goes to the gemba, and **implements** changes during the event.

Before the event: the charter

Item	Example
Scope	Cutting room, from fabric issue to bundle dispatch
Problem	Lead time 3 days, WIP 18,000 pcs
Target	Lead time 1.5 days, WIP 9,000 pcs
Baseline data	Measured last 4 weeks
Team	6–8 people: operators, supervisor, maintenance, QA, one outsider
Sponsor	Production manager
Dates and resources	4 days, maintenance support on call

A typical 5-day agenda

Day	Activities
1	Training, go to gemba, map the current state, measure
2	Find wastes and root causes, generate ideas
3	Try changes on the floor — move, test, adjust
4	Refine, write standard work, train operators
5	Measure results, present to management, list follow-ups

After the event: follow up!

- A **30-day action list** with owners and dates for anything not finished.
- **Check results at 30, 60 and 90 days** — are gains holding?
- Update standards and training. Many events fail because follow-up is forgotten; the gains slide back within weeks.

Assessor question KZ-4: *Are kaizen events planned with clear scope, team, baseline and targets, and followed up?* Assessors ask for the **charter** and the **30/60/90-day follow-up records**.

Key points

- 3–5 day focused team event at the gemba
- Charter: scope, problem, target, baseline, team, sponsor
- Implement during the event
- Follow up at 30/60/90 days

Knowledge check

1. What should a kaizen event charter include?

A. Scope, problem, target, baseline, team and sponsor
B. Salary changes
C. Only the date
D. Lunch menu

2. How long does a typical kaizen event last?

A. 1 hour
B. 3–5 days
C. 6 months
D. 2 years

3. Why include someone from outside the area?

A. No reason
B. To fill seats
C. Fresh eyes ask questions insiders no longer ask
D. To blame them

4. What is the most common reason event gains disappear?

A. Good standards
B. No follow-up after the event
C. Too many measurements
D. Too much training

Answers are in the answer key at the back.

MODULE 6 OF 6 · 45 MIN

Standardize, sustain and measure

Make improvements stick, spread them, prove the results — and how our assessors score a kaizen system.

Auditor checks: `KZ-5` `KZ-6` `KZ-1 - KZ-7`

SDCA before PDCA

Standardize–Do–Check–Act (SDCA) keeps the current best way stable; **PDCA** raises it. Kaizen alternates between them: improve → standardize → improve again. A standard is **the best known way today**, not forever.

Make it stick

- Update **SOPs, standard work sheets, one-point lessons and checklists**.
- **Train** everyone who does the work, and check they follow it.
- Add the new check to **audits** and **daily boards**.

Spread it — yokoten

Yokoten means "horizontal deployment": copy a proven improvement to **similar lines, shifts and sites**. Keep a list of improvements and where each has been deployed.

Measure results — PQCDSM

Letter	Measure	Example
P	Productivity	Pieces per hour, SAM efficiency
Q	Quality	Defect %, rework, first-pass yield
C	Cost	Material, energy, overtime
D	Delivery	Lead time, on-time delivery
S	Safety	Accidents, near misses
M	Morale	Ideas per person, absenteeism

Always compare **before and after** against the **baseline**, and have finance verify savings where possible.

How our assessors score your kaizen system

The Kaizen system assessment uses seven questions (KZ-1 to KZ-7) on the ERP's 0–4 scale:

Code	Area
KZ-1	Defined system: policy, roles, coordinator, budget, top management support
KZ-2	Idea scheme open to all, fast feedback
KZ-3	Structured method (PDCA, A3, 5 Why, fishbone) documented
KZ-4	Kaizen events planned and followed up
KZ-5	Improvements standardized and spread
KZ-6	Results measured and verified against baseline
KZ-7	High participation and recognition

Scores: **4 Fully · 3 Mostly · 2 Partly · 1 Started · 0 Not in place.** Overall: **Excellent ≥ 90 %, Good 75–89 %, Fair 50–74 %, Poor < 50 %.**

> **Practise now:** run the **Kaizen self-check** in this course for your organization.

Key points

- SDCA keeps it stable; PDCA raises it
- Update standards, train, audit
- Yokoten: spread to similar areas
- Measure PQCDSM against baseline
- KZ-1 to KZ-7 scored 0–4

Knowledge check

1. What is yokoten?

A. A safety rule
B. Spreading a proven improvement to similar areas
C. A Japanese meal
D. A type of waste

2. What does SDCA stand for?

A. Standardize, Do, Check, Act
B. Sort, Do, Clean, Audit
C. Scan, Design, Code, Assemble
D. Start, Delay, Cancel, Approve

3. In PQCDSM, 'D' stands for...

A. Discipline
B. Delivery
C. Design
D. Defects

4. Which shows KZ-6 is in place?

A. A kaizen poster
B. A suggestion box
C. A training plan
D. Before/after data verified against the baseline

Answers are in the answer key at the back.

APPLY IT

Kaizen audit self-check

Assessment of the continuous improvement system and its results. These are the same questions our assessors use. Rate each one: **4 Fully in place · 3 Mostly · 2 Partly · 1 Started · 0 Not in place · N/A**.

Score = points ÷ (4 × questions scored) × 100. Excellent ≥ 90 %, Good 75–89 %, Fair 50–74 %, Poor < 50 %.

Ref	Question	Rating	Evidence / note
System			
KZ-1	Is there a defined kaizen system (policy, roles, coordinator, budget) supported by top management? Evidence: Kaizen policy, organization		
KZ-2	Is there an idea / suggestion scheme open to all employees with fast evaluation and feedback? Evidence: Suggestion log, response times		
Method			
KZ-3	Is a structured method used (PDCA, A3, 5 Why, fishbone) and documented for each improvement? Evidence: A3 reports, kaizen sheets		
KZ-4	Are kaizen events (blitz) planned with clear scope, team, baseline and targets, and followed up? Evidence: Event charters, follow-up records		
KZ-5	Are successful improvements standardized (updated procedures, standard work, training) and spread to similar areas? Evidence: Updated standards, horizontal deployment records		
Results and culture			
KZ-6	Are results measured (cost, quality, time, safety) and verified against the baseline? Evidence: Before and after data		
KZ-7	Is participation high (ideas per employee, share of staff		

involved) and are contributions recognized?

Evidence: Participation statistics, recognition records

PRACTISE

Practical assignment: Your first documented kaizen (A3)

Pick one real, small problem in your area. Solve it with PDCA and document it on one A3 page.

What to submit

1. A3 report: background, current condition with data, target, root cause (5 Why and/or fishbone), countermeasures, plan, results
2. Before and after photos or data
3. The updated standard (SOP, one-point lesson or checklist)
4. Where else this could be deployed (yokoten)

Marking criterion	Marks
Clear, measured problem and target	20
Root cause analysis	30
Results verified against baseline	25
Standardization and yokoten	25
Total (pass 60)	**100**

Glossary

A3	One-page problem-solving and reporting format.
DOWNTIME	The eight wastes: Defects, Over-production, Waiting, Non-utilized talent, Transport, Inventory, Motion, Extra-processing.
Gemba	The real place where value is created.
Kaizen event	A focused 3–5 day team improvement workshop.
Muda / Mura / Muri	Waste / unevenness / overburden.
PDCA	Plan, Do, Check, Act — the improvement cycle.
PQCDSM	Productivity, Quality, Cost, Delivery, Safety, Morale.
SDCA	Standardize, Do, Check, Act — the maintenance cycle.
Yokoten	Horizontal deployment of a proven improvement.

Answer key: knowledge checks

Module 1: 1–B, 2–C, 3–B, 4–B

Module 2: 1–C, 2–C, 3–C, 4–B

Module 3: 1–D, 2–A, 3–D, 4–B

Module 4: 1–B, 2–C, 3–B, 4–B

Module 5: 1–A, 2–B, 3–C, 4–B

Module 6: 1–B, 2–A, 3–B, 4–D