The term **KAIZEN** is Japanese, meaning to change (kai) for the better (zen). Kaizen teams achieve this by analyzing every part of a work process – then transforming it to be simpler, faster, better, and less costly.

### Ground Rules
- Everyone participates
- Open, honest dialogue
- Respect opinions
- Consensus
- Leave rank at the door

### Housekeeping
- Silence your cell phones
- Minimize interruptions
- Be on time
- Stand and stretch
- It’s always snack time
- Dress in casual clothes

### Expectations
- A transformed process
- Resource savings
- Customers served faster
- Less waste in process
- Hard work
- Post-It Notes
- Change (for the better)

### Contents
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**This is what transformation looks like!**

After a Kaizen event, this redesigned process has **183 fewer steps** (80% reduction), **52 fewer decision points** (84% reduction), and **11 fewer delays** (61%). The fully streamlined process will move **1.5 months faster**.
Words you’ll hear (and use) during the Kaizen event

**Consensus**: Agreement in which all members of the group publicly state that they will actively support the decision, even if it might not be the first choice for some in the group.

**Cycle time**: The length of time, on average, that it takes to complete a step or set of steps within a process. Sometimes referred to as touch time.

**5S + Safety**: A method for creating and maintaining an organized, high-performance workplace. 5S stands for sort, straighten, shine, standardize, sustain.

**Lead time**: The average time it takes to meet a customer request or demand – from the very start of the process to the end. This includes time when the unit is being actively worked on, plus wasted time due to delays, loopbacks, rework, and others forms of waste. (See TIM U WOOD) Also known as throughput time or turnaround time.

**Pareto principle**: The observation that for many events, roughly 80% of the effects come from 20% of the causes. Also known as the law of the vital few.

**Poka-yoke**: Any effort to eliminate the root causes of defects, so that rework-generating problems don’t occur in the first place. Also known as defect prevention or mistake-proofing. Often used with forms.

**Round-robin**: Getting comment from everyone in a group, with one person speaking, then the next, and then the next – until all voices are heard.

**SIPOC**: Stands for suppliers, inputs, process, outputs, and customers. You obtain inputs from suppliers, add value through your process, and provide an output that meets or exceeds customer requirements.

**Swim lanes**: Separate rows on a process map that indicate separate functions.

**TIM U WOOD**: Acronym used to remember the eight forms of waste: transportation, information/inventory, motion, underutilization, waiting, overproduction, overprocessing, and defects.

**Value-added, or VA**: Work activities that transform information into services and products the customer is willing to accept. To qualify as value-added, an activity must meet these three requirements: (1) Done right the first time, with no defects. (2) Transformational in that it adds form or function. (3) Customer is willing to pay for it. Typically, just 1-5% of a process is value-added.

**Non-value-added, or NVA**: Consumes resources, does not contribute directly to service, and is not important to the customer.

**Non-value-added but necessary, or NVAN**: Not important to the customer, but the work activities/steps are required by statute or law.

**Waste**: Any activity that uses resources but does not create value for the customer. (See TIM U WOOD)
Example: SIPOC in action

SIPOC stands for suppliers, inputs, process, outputs, and customers.

In one of the first steps of every Kaizen event, the team develops a SIPOC to establish a common understanding of the big picture.

The SIPOC shown here was created during a Kaizen event at the Public Utilities Commission of Ohio.
PROCESS MAPPING is all about making the invisible visible.

By creating a process map, you will:

- Get a clear and detailed visual of what is occurring in the process
- Create a common understanding
- Identify all stakeholders involved in the process
- Identify process handoffs and loopbacks
- Identify waste and value-added activities

Process map key:

- Different functional areas of process
- Beginning and end points of the process
- Any activity where work is performed in the process
- Decision point: Steps in the process where information is checked against established standards and a decision is made on what to do next (must have two or more different paths)
- Delay: Any time information is waiting before the next task or decision occurs in the process (examples: in-baskets, batching, multiple approvals)
- Connects tasks performed by the same person or area, but without any physical movement occurring
- Indicates physical movement of information, items, etc. from one person or function to another
- Indicates electronic movement of information from one person or function to another

Process mapping tips:

- One voice
- Write tasks in “one noun, one verb” format, or “one verb, one noun”
- Stay at a consistent level
- Start by identifying the functional area that starts the process
- Detail the tasks, decisions, and delays in each functional area
- Follow a “swim lane” model
- Draw in your swim lane lines
- Connect steps with arrows

Process mapping questions:

- Who starts this process?
- How does the process start?
- And then what…?
- What happens next…?
- Are we in the weeds?
- If I am the customer, I do…?
While you and your colleagues are developing the current-state process map, you’ll likely come up with ideas for improvement. Write these below so you’ll have them ready later in the Kaizen event.

As the Kaizen event unfolds and you make discoveries and get ideas, capture your AHAs below.
TRANSPORTATION
- Transport from office to office
- Transport from floor to floor
- Transport from building to building
- Other transportation and travel

INFORMATION, INVENTORY
- Finished product
- Storage
- Printed in advance
- Work in process
- In the warehouse
- Requiring unnecessary info on a form

MOTION
- Inter-office movement
- Office to office
- Cubicle to cubicle
- Going to the copier or scanner
- Going to the fax
- Going to the storeroom
- Reaching
- Bending

UNDERUTILIZATION
- Employees
- Talent
- Office space
- Technology
- Equipment

WAITING
- Nonproductive time
- Waiting for:
  - copier
  - scanner
  - delivery
  - catchup
  - person upstream
  - mail/shipper
  - computer

OVERPRODUCTION
- Making too many
- Making in advance of requests
- Throwing away the excess
- Things getting outdated
- "We have to be ready"
- Not cautious, but wasteful

OVERPROCESSING
- Adding things that nobody wants
- Report that nobody reads
- "Gold plating"
- The best
- Better than good enough
- Beyond meeting customer expectations

DEFECTS
- Mistakes
- Broken
- Inaccurate
- Can’t read
- Can’t understand
- Wasted materials
- Returned
**IMPACT-CONTROL MATRIX**

1. Write down all of your improvement ideas.

2. All ideas are collected.

3. The ideas are discussed and placed on the impact-control matrix.

<table>
<thead>
<tr>
<th>I. High Impact</th>
<th>II. High Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Control</td>
<td>High Control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Low Impact</th>
<th>IV. Low Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Control</td>
<td>High Control</td>
</tr>
</tbody>
</table>

4. The result will look like this, with the ideas sorted – and the group moving closer to clean-sheet redesign.

Go to [lean.ohio.gov](http://lean.ohio.gov) for resources, results, and learning opportunities.
CLEAN-SHEET REDESIGN

MAKE IT TRANSFORMATIONAL

• Create a new process that is **significantly better** than the old one
• Reduce process steps, costs, and time by **at least 50%**
• **Delight** the customers

**Tips for designing a new and transformed process:**

• Design process around value-adding activities
• Ensure that work is performed where it makes the most sense
• Provide single point of contact for customers and suppliers
• If the inputs coming into the process naturally cluster, create a separate process for each cluster
• Ensure a continuous flow of the “main sequence”
• Reduce waiting, moving, and rework time
• Reduce or eliminate batching
• Reduce checks and reviews
• Push decision-making down to the lowest reasonable level
• Build in quality in order to reduce inspection and rework

Example: **Clean-sheet redesign in action**

In the photo, a discussion is under way regarding a newly created redesign of the process. This subgroup is one of three subgroups (from the Ohio Department of Insurance) that are working simultaneously, each developing a separate clean-sheet redesign.

Below are three clean-sheet redesigns from a Kaizen event at the Ohio Development Services Agency.
MEASURES OF SUCCESS

Time-based process measures
- Lead time (beginning to end)
- Cycle time (touch time)
- Waiting time
- Time to complete form
- Motion, travel time

Count-based process measures
- Process steps
- Handoffs
- Decision points
- Loopbacks
- Delays
- Customer complaints
- Number of forms
- Inventory quantity
- Backlog

Outcome measures
- Customer satisfaction
- Redirected work hours due to gains in efficiency
- Direct cost savings $
- Customer cost savings $

Cost savings can accrue from reductions in:
- Imaging, scanning
- Paper, forms
- Printing
- Postage, shipping
- Storage, inventory
- Fuel usage
- Other supplies
- Travel
- Overtime
- Etc.

Examples: Measurement in action

DASHBOARD

Cost Benefit Analysis
- Unit Direct Cost Savings
  - Record Retention Costs
  - Bulk Shipments
  - J.A.S. Mailing Foams
  - Application Printing
- Unit Cost Avoidance
  - 36 - 275 days
  - 2.043 hrs
  - 21 - 24 days
  - 75 in.
  - 158 - 195 hrs
  - Possible

SURE CARD Current New %

Process Steps 183 26 86%
Loop Backs 10 2 80%
Hand-Offs 29 6 79%
Decision Points 39 5 87%
Waste 54 5 91%

Leantime 19.51 Days 45-10 76-90 Days

Go to lean.ohio.gov for resources, results, and learning opportunities.
### Action Registers

In a Kaizen event with the Ohio Board of Nursing, the team developed action registers for IT, consumer information, complaint processing, training, communication, and more.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHO</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>What task or objective needs to be accomplished?</td>
<td>Who will take the lead to ensure that the team accomplishes it?</td>
<td>When will the task begin, and when it will be completed?</td>
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**Example: Action Registers**

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AFTER THE KAIZEN EVENT...

10 WAYS YOU CAN MAGNIFY THE MOMENTUM

1. Follow through and begin implementing your action items.

2. If there’s a briefing for staff about the Kaizen event, be sure to attend. Serve as a presenter if you have the opportunity.

3. If you have co-workers who weren’t on the Kaizen team, fill them in. Over time, involve them in the change process.

4. If you hear comments from colleagues that suggest they’re unclear or mistaken about changes that will result from the Kaizen event, kindly provide the correct information.

5. When there are meetings relating to your Kaizen project, attend and participate.

6. Also attend the more formal update meetings to check implementation progress and clarify the next round of action steps. Update meetings typically occur about 30, 60, and 90 days after the Kaizen event.

7. Resist slipping back to your old way of doing things. Go with the new way, knowing that change will be challenging in the short term but better for everyone in the long term.

8. Exercise patience and persistence. After the fast-moving Kaizen event, things at work might seem a bit slow by comparison. Don’t lose your focus. You have a plan – now work the plan.

9. If you see that key actions are not being implemented – actions you’re not responsible for but you know to be important – bring it up with the appropriate person and offer to help.

10. Be thoughtfully flexible as implementation unfolds. Keep an open mind and a willingness to make a good project even better.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHO ELSE</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>What action steps are you responsible for?</td>
<td>Who else (if anyone) will you involve?</td>
<td>When will you begin and complete this activity?</td>
</tr>
</tbody>
</table>

Use this action register to write down your own action steps.

leanohio@das.ohio.gov
KEY TERMS:

**consensus:** All team members state that they will actively support the decision, even if it might not be the first choice for some.

**lead time:** Average time from the start of the process to the finish.

**Pareto Principle:** Roughly 80% of the effects come from 20% of the causes.

**poka-yoke:** Any effort to eliminate the root causes of defects, so that rework-generating problems don’t occur in the first place.

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**waste:** Any activity that uses resources but doesn’t create value for the customer. (See TIM U WOOD)

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**SIPOC:**

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<tr>
<th>SUPPLIERS</th>
<th>INPUTS</th>
<th>PROCESS</th>
<th>OUTPUTS</th>
<th>CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who provides inputs that are needed to make this process work? Can include people, other offices, agencies, organizations, etc.</td>
<td>What resources do you need to perform this process? Can include materials, supplies, information, authorization, services, etc.</td>
<td>What are the 5-7 major functions that make up this process?</td>
<td>What is produced by this process? Can include services, products, information, decisions, etc.</td>
<td>Who benefits from this process?</td>
</tr>
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**PROCESS MAP KEY:**

- Different functional areas of process
- Beginning and end points of the process
- Any task/activity where work is performed
- Decision point: Steps where information is checked against established standards and a decision is made on what to do next
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**QUICK-VIEW REFERENCE**

- **SUPPLIERS:** Who provides inputs that are needed to make this process work?
- **INPUTS:** What resources do you need to perform this process?
- **PROCESS:** What are the 5-7 major functions that make up this process?
- **OUTPUTS:** What is produced by this process?
- **CUSTOMERS:** Who benefits from this process?

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**MEASURES:**

- **Time-based measures**
  - Lead time
  - Cycle time
  - Waiting time
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  - Motion, travel time
- **Count-based measures**
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  - Handoffs
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  - Delays
  - Customer complaints
  - Number of forms
  - Inventory quantity
  - Backlog

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**IMPACT-CONTROL:**

- **High Impact**
  - Low Control
- **High Impact**
  - High Control
- **Low Impact**
  - Low Control

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**TIM U WOOD:**

- Transportation
- Information/Inventory
- Motion
- Underutilization
- Waiting
- Overproduction
- Overprocessing
- Defects

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**KEEP CALM AND KAIZEN ON**

“The measure of intelligence is the ability to change.”

– Albert Einstein

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