

Training, Teaching and Learning Materials (TTLM)

# **AKAKI POLY TECHNIC COLLEGE**



Ethiopian TVET-System

## **HARDWARE & NETWORK SERVICING**

Level – IV

# **Learning Guide**

**Unit of Competence:** Managing Continuous Improvement System

**Module Title:** Managing Continuous Improvement System

**LG Code:** EIS HNS4 01 0517

**TTLM Code:** EIS HNS4 M01 0517

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**LO #1- Review programs, systems and processes**

**LO #2-Develop options for continuous improvement**

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## Program

- A plan of action to accomplish a specified end.
- a program, also called an application or software, is a set of instructions that process input, manipulate data, and output a result.
- For example, Microsoft Word is a word processing program that allows users to create and write documents.



## System

- A system is a group of interacting or interrelated elements that act according to a set of rules to form a unified whole.
- A system is a collection of elements or components that are organized for a common purpose.



## Process

- A process is a series of steps and decisions involved in the way work is completed.

### A New Definition for “What is a Process?”

A process consists four major elements:

#### 1. Steps and decisions

- A series of steps and decisions describing the way work is completed.

#### 2. Variability of processing time and flow

- The pattern of processing times.

#### 3. Timing and interdependence

- when the arrivals happen, when people work, etc.

#### 4. Assignment of resources

- how many and where are they assigned.

## 1.1. Establishing strategies to monitor and evaluate performance of key systems and processes

### What is monitoring and evaluation?

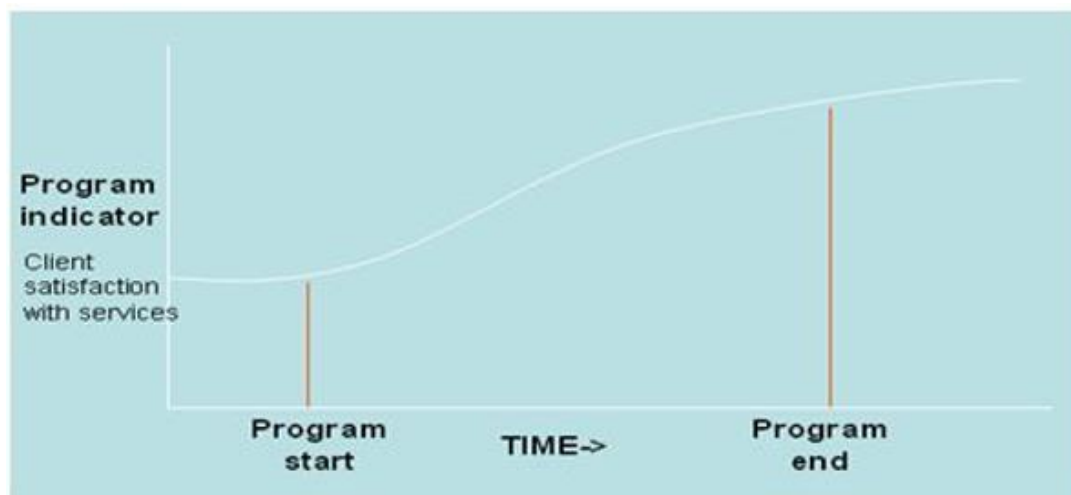
#### Monitoring

Monitoring is the systematic process of collecting, analyzing and using information to track a program's progress toward reaching its objectives and to guide management decisions.

Monitoring usually focuses on processes, such as when and where activities occur, who delivers them and how many people or entities they reach.

Monitoring is conducted after a program has begun and continues throughout the program implementation period.

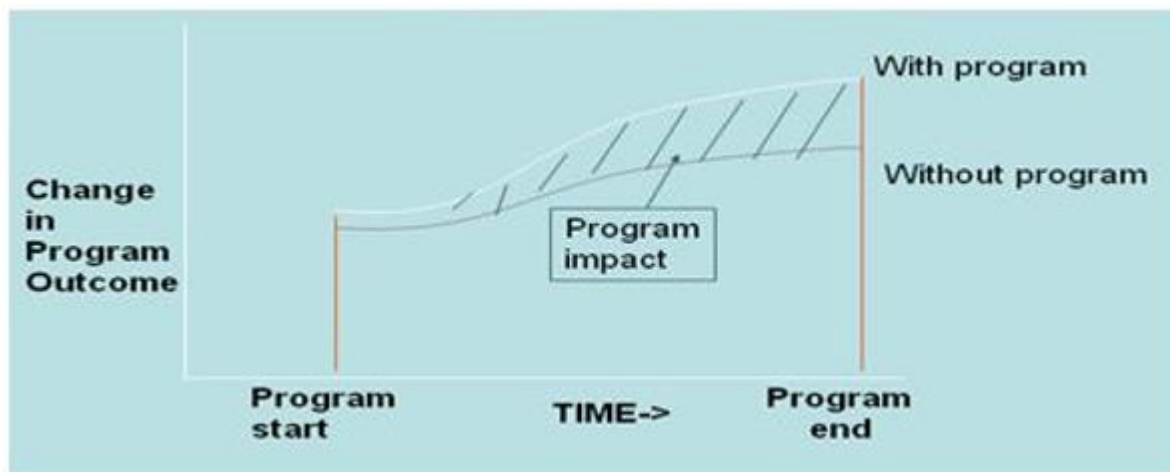
Illustration of program Monitoring



## Evaluation

Evaluation is the systematic assessment of an activity, project, program, strategy, policy, topic, theme, sector, operational area or institution's performance. Evaluation focuses on expected and achieved accomplishments, examining the results chain (inputs, activities, outputs, outcomes and impacts), processes, contextual factors and causality, in order to understand achievements or the lack of achievements. Evaluation aims at determining the relevance, impact, effectiveness, efficiency and sustainability of interventions and the contributions of the intervention to the results achieved.

Illustration of program impact



## Comparison Chart

BASIS FOR COMPARISON	MONITORING	EVALUATION
Meaning	Monitoring refers to a routine process, that examines the activities and progress of the project and also identifies bottlenecks during the process.	Evaluation is a sporadic activity that is used to draw conclusion regarding the relevance and effectiveness of the project or program.
Related to	Observation	Judgement
Occurs at	Operational level	Business level
Process	Short term	Long term
Focuses on	Improving efficiency	Improving effectiveness
Conducted by	Internal Party	Internal or External Party
When	<b>Continuous:</b> day-to-day, routine, ongoing activities	<b>Periodic:</b> important milestones(mid-term or end of project)
Depend	On inputs, activates	On Outcomes and impacts

## **Key Differences Between Monitoring and Evaluation**

The difference between monitoring and evaluation can be drawn clearly on the following premises:

1. By monitoring is meant a routine process, that scrutinizes the activities and progress of the project and also finds out the deviations that occur while undertaking the project. As against, evaluation is a periodical activity that makes inferences about the relevance and effectiveness of the project or program.
2. While monitoring is observational in nature, evaluation is judgmental.
3. Monitoring is an operational level activity, performed by the supervisors. On the other hand, evaluation is a business level activity performed by the managers.
4. Monitoring is a short-term process, that is concerned with the collection of information regarding the success of the project. Conversely, evaluation is a long-term process, which not only records the information but also assesses the outcomes and impact of the project.
5. Monitoring focuses on improving the overall efficiency of the project, by removing bottlenecks, while the project is under process. Unlike, evaluation stresses on improving the effectiveness of the project, by making the comparison with the established standards.
6. Monitoring is usually carried out by the people who are directly involved in its implementation process. In contrast, evaluation can be conducted by internal staff of the organization, i.e. managers or it can also be carried out by independent external party, who can give their impartial views on the project or program.

**Designing a Monitoring and Evaluation system, or M&E system, is a complex task that usually involves staff from different units.**

Step 1: Define the purpose and scope of the M&E system

Step 2: Agree on outcomes and objectives - Theory of change (including indicators)

Step 3: Plan data collection and analysis (including development of tools)

Step 4: Plan the organization of the data

Step 5: Plan the information flow and reporting requirements (how and for whom?)

Step 6: Plan reflection processes and events

Step 7: Plan the necessary resources and skills

## **1.2. Undertaking detailed analyses of supply chains, operational and product/service delivery systems**

### **What Is a Supply Chain?**

A supply chain is a network between a company and its suppliers to produce and distribute a specific product to the final buyer. This network includes different activities, people, entities, information, and resources. The supply chain also represents the steps it takes to get the product or service from its original state to the customer.

The entities in the supply chain include producers, vendors, warehouses, transportation companies, distribution centers, and retailers.

The functions in a supply chain include product development, marketing, operations, distribution, finance, and customer service.

Supply chain management results in lower costs and a faster production cycle.

### **Understanding Supply Chains**

A supply chain involves a series of steps involved to get a product or service to the customer. The steps include moving and transforming raw materials into finished products, transporting those products, and distributing them to the end-user. The entities involved in the supply chain include producers, vendors, warehouses, transportation companies, distribution centers, and retailers.

The elements of a supply chain include all the functions that start with receiving an order to meeting the customer's request. These functions include product development, marketing, operations, distribution networks, finance, and customer service.

Supply chain management is a very important part of the business process. There are many different links in this chain that require skill and expertise. When supply chain management is effective, it can lower a company's overall costs and boost profitability. If one link breaks down, it can affect the rest of the chain and can be costly.



### 1.3. Identifying performance measures, and assessment tools and techniques, and evaluate their effectiveness

All performance measures (that have ever existed for any program in the history of the universe) fall into one of four categories, derived from the intersection of quantity and quality vs. effort and effect.

	QUANTITY	QUALITY
EFFORT	<i>What did we do?</i> How much service did we deliver?	<i>How well did we do it?</i> How well did we deliver service?
EFFECT	<i>Is anyone better off?</i> How much change for the better did we produce?	<i>Is anyone better off?</i> What quality of change for the better did we produce?

- What did we do?  
(e.g. # clients served, # activities performed, etc.).
- How well did we do it?  
(e.g. % timely actions, % complete actions, client staff ratio, staff turnover rate, unit cost, etc.).
- Is anyone better off?  
(# and % of clients who show improvement in skills/ knowledge, attitude, behavior or circumstance).

## **5 Steps to a Performance Evaluation System**

1. Develop an evaluation form.
2. Identify performance measures.
3. Set guidelines for feedback.
4. Create disciplinary and termination procedures.
5. Set an evaluation schedule.

### **1. Develop an evaluation form.**

Performance evaluations should be conducted fairly, consistently and objectively to protect your employees' interests and to protect your practice from legal liability. One way to ensure consistency is to use a standard evaluation form for each evaluation. The form you use should focus only on the essential job performance areas. Limiting these areas of focus makes the assessment more meaningful and relevant and allows you and the employee to address the issues that matter most. You don't need to cover every detail of an employee's performance in an evaluation.

For most staff positions, the job performance areas that should be included on a performance evaluation form are job knowledge and skills, quality of work, quantity of work, work habits and attitude. In each area, the appraiser should have a range of descriptors to choose from (e.g., far below requirements, below requirements, meets requirements, exceeds requirements, far exceeds requirements). Depending on how specific the descriptors are, it's often important that the appraiser also have space on the form to provide the reasoning behind his or her rating.

Performance evaluations for those in management positions should assess more than just the essential job performance areas mentioned above. They should also assess the employee's people skills, ability to motivate and provide direction, overall communication skills and ability to build teams and solve problems. You should have either a separate evaluation form for managers or a special managerial section added to your standard evaluation form.

### **2. Identify performance measures.**

If you have current job descriptions for each position in your practice, you've already taken the first step toward creating standard performance measures, which are essentially specific quantity and quality goals attached to the tasks listed in a job description. A job description alone can serve as a measurement tool during an evaluation if, for example, you're assessing whether an employee's skills match the requirements of the position. But standard performance measures take the job description one step further. For example, one task listed in a receptionist's job description might be entering new and updated patient registrations into the computer.

### **3. Set guidelines for feedback.**

Feedback is what performance evaluations are all about. So before you implement your performance evaluation system, make sure that everyone who will be conducting evaluations knows what kind of feedback to give, how to give it and how to get it from the employee in return.

#### **Give balanced feedback**

Don't make the common error of glossing over an employee's deficiencies and focusing only on his or her strengths.

#### **Encourage feedback from the employee**

Encourage feedback from the employee. After you've discussed the results of the evaluation with the employee, encourage him or her to give you some non-defensive feedback.

### **4. Create disciplinary and termination procedures.**

In some cases, even after a thorough performance evaluation and a discussion of expected improvements, an employee will continue to perform poorly. You need to be prepared to handle such a situation by having well-defined, written disciplinary and termination procedures in place. These procedures should outline the actions that will be taken when performance deteriorates – a verbal warning, a written warning if there is no improvement or a recurrence, and termination if the situation is not ultimately resolved.

#### **Verbal warning**

This should be given in private, with the behavior or reason for the discipline clearly stated.

#### **Written warning**

How you handle the written warning plays a critical role in the success of your disciplinary and termination procedures. This is the time to make it clear to the employee just how serious his or her performance problem is.

### **5. Set an evaluation schedule.**

Once you've built your performance evaluation system – the evaluation form, the performance measures, the feedback guidelines and the disciplinary procedures – you just need to decide when to conduct the performance evaluations.

## **Performance Improvement Strategies**

It requires a deeper understanding of the following aspects:

1. Vision & Mission Statements
  - The Organization's Vision Mission Statements
2. Current Processes
  - The Current Processes followed in the Organization
3. Current Performance Levels
  - The Current Performance levels visa vis the targets
4. Customer Satisfaction Levels Report
  - The Customer Satisfaction Levels Reports
5. Other Documents
  - Any Other Documents giving the details of the prevalent practices in the company

Necessary research from the above study needs to be done to chart out the correct performance improvement strategy.

Steps for performance improvement strategies

1. Organization Structure
  - Defining an Efficient Organization Structure.
2. Roles & Responsibilities
  - Creating Roles & Responsibilities across all levels of the Organization.
3. Business Results
  - Business Results.
4. Operational Effectiveness
  - Operational Effectiveness (Financial Performance & Disciplinary Aspects with respect to Finance).
5. Infrastructure & Facilities
  - Infrastructure & Facilities in the company.
6. Measure of Performances (MOPs)
  - Developing Measure of Performances (MOPs) by designing Key Result Areas (KRAs) & Key Performance Indicators (KPIs).
7. Organization Effectiveness
  - Organization Effectiveness (HR Practices, Reward Management Systems & Initiative Management).
8. Process Adherence
  - Process Adherence (Review Mechanisms, Management Information Systems & Reports).

## **1.4. Analyzing performance reports and variance from**

### **What is a Performance Report?**

A performance report addresses the outcome of an activity or the work of an individual. The report may compare actual outcomes to a budget or standard, as well as the variance between the two figures. The recipient of a performance report is expected to take action when there is an unfavorable variance. A key part of a performance report is the baseline from which variances are calculated. If the baseline is not reasonable, then any outcomes derived from it will be invalid.

### **What is the Variance Analysis?**

Variance analysis is a method of assessing the difference between estimated budgets and actual numbers.

## **1.5. Identifying and analyzing changing trends and opportunities**

Trends are patterns as a result of analysis and reports.

### **Why identify and analyses trends?**

- New ways of doing things – programs, systems & processes
- Forecast future behavior – internal and external to organization
- Identify improvements

## **1.6. Seeking advice from specialists to identify technology and electronic commerce opportunities**

### **What is a Specialist?**

A person who concentrates primarily on a particular subject or activity; a person highly skilled in a specific and restricted field.

Benefits include:

- Fresh set of eyes - clean lens, 100% focus.
- Independent, unbiased
- Good knowledge of industry best practice
- Diverse experience
- Offer a broad range of options

## **Self-Check-1**

### **I. Give short Answer**

1. Define Program, give example.
2. Define System.
3. Explain in detail Process.
4. Compare Monitoring and Evaluation.
5. Explain in detail Supply Chain? Give example.
6. What is a Performance Report?
7. What is Variance Analysis?
8. What is Trend?
9. What is a Specialist?

## **Lo2. Develop options for continuous improvement**

### **What is Continuous Improvement?**

Continuous Improvement is an ongoing effort, long-term approach to improving processes, products and services. It is also called Continual Improvement or CI. These efforts can seek "incremental" improvement over time or "breakthrough" improvement all at once.

### **The Aim of Continuous Improvement**

- Increase Efficiency
- Increase Quality
- Reduce Costs

### **Benefits of Continuous Improvement**

- Improved product quality
- Increased efficiency and productivity
- Decreased cost
- Reduced waste
- Employee satisfaction and teamwork
- Customer satisfaction

## **2.1. Brief groups on performance improvement strategies and innovation**

### **Creativity**

Creativity is a phenomenon whereby something **new** and **valuable** is formed. Creativity is using our mind to conceive of something unusual or original.

### **Innovation**

Innovation is the **practical implementation** of **ideas** that result in the introduction of new goods or services or improvement in offering goods or services. Innovation is the process of implementing that new idea.

Management consultant Peter Drucker has said, "**Innovation** is change that creates a new dimension of performance."

### **Innovation is a process that involves three basic stages:**

1. **Identify the challenge** or problem you want to solve,
2. **Generate ideas** for possible solutions, and
3. **Take action** to apply the solution in your workplace.

## **2.2. Fostering creative climate and organizational learning**

Harvard Business School's Teresa Amabile has labelled the four stages of the creative process: Preparation, incubation, illumination and execution.

1. Promote creativity and innovation as key organizational values and the natural human enjoyment that accompanies this creative process. Communicating the importance of creativity encourages staffers to experiment and take risks. Make sure managers understand they will be assessed on the creative spirit and efforts (not results) of those they supervise.
2. Give staffers permission to make creative mistakes. Recognize that there is risk in creativity and new ideas will sometimes fail. Make it clear to the organization that failing isn't the worst thing, not trying is!
3. Budget time and money for creative efforts. Carve out blocks of time for formal and informal brainstorming and experimentation. This is helpful in the incubation stage of the creative process.
4. Stimulate creativity through training, outside speakers, and other opportunities to expose staff to external thinking and ideas. This is crucial in the preparation stage.
5. Make sure some of your new staff hires are from different industries or professions. They can help you and your staff look at old challenges in new ways and can offer a needed fresh perspective.
6. Discourage negativity and NIH (not-invented-here) thinking. Watch for those killer phrases ("We tried that already"; "That will never work"; "That will cost too much") that can strangle new ideas in the incubation and illumination stages.
7. Resist pressure for immediate and significant results from creativity efforts. This will give new ideas time to develop properly and it will also encourage further innovative thinking.
8. Protect creative ideas from the organization's bureaucracy. Large organizations can kill such initiatives through committees and reviews.
9. Reward creative individuals and creative teams. The people in your organization who contribute to innovation should be recognized and praised, and rewarded financially.

## **2.3. Encouraging, testing and recognizing new ideas and entrepreneurial behavior**

How to Encourage New Ideas and Innovations

### **Essential learnings:**

- Create autonomy and idea time
- Test out ideas in low-risk environments
- Fail fast, learn quickly



## **Here are five ways you can encourage new ideas and innovation:**

### **1. Empower Employees to Make Decisions**

Provide opportunities for employees to be involved in decision making. Attempt new ways of doing things that can help employees feel that they and their contributions are valued and appreciated. This can be a very powerful way to increase engagement. Autonomy, within set boundaries, gives employees the opportunity to develop their capabilities and show what they can do. Successfully carrying out new responsibilities or completing challenging projects will give team members a sense of achievement and increase their job satisfaction.

### **2. Set Aside Time**

At the Minnesota Mining and Manufacturing Company, or 3M, as it's known today, they called it Fifteen Percent Time. This was a policy that allowed employees to spend 15% of their work time daydreaming, doodling or experimenting with ideas that didn't necessarily have to do with their work at the company. As 3M knew, this kind of daydreaming is the crucible of invention and fosters passion for our day-to-day work.

### **3. Don't Fear Failure**

Nothing kills creativity faster than the fear of failure, so as much as you should celebrate the success of any innovation, you should also celebrate the failures. It is a fine balance – you don't want to encourage reckless behavior – but encourage people to reach and work beyond their comfort zones. Be sure to analyse the ideas that failed. Unpick the thinking behind a particular choice, how it went wrong. What could have been done to either avoid it or produce a different outcome? This helps to remove fears and build a creative culture.

### **4. Work Out Inexpensive Pilots**

Find ways to pilot ideas on a smaller scale so that you can put them to the test. Gain evidence to justify the investment required and draw lessons from the initial phase – that will be of benefit to later, fuller implementations. Departmental applications, telephone surveys of existing customers and small investments can all be used to lay a foundation for innovation while avoiding unnecessary expenditure.

### **5. Be an Innovative Leader**

There's no better way to encourage innovation in your company than to lead by example. Managers should be role models for workplace passion, positive outlook, clear direction and vision, and of course, embracing change. A willingness to challenge the status quo and innovate while also encouraging employees to be creative, innovative and to challenge their own beliefs and those of the organization – those are the hallmarks of a transformational leader.

## 9.4. Accepting failure of an idea during trialing, and recognizing, celebrating and embedding success into systems

### Failure

Failure is the condition of **not** getting the **desired outcome** and is normally the **opposite** of success.

### Success

Success is the accomplishment of reaching a

- **goal,**
- **purpose** or
- **intended outcome.**

### what good can come out of failure?

Failure is actually an important, perhaps even crucial, ingredient for success. The **primary difference** between **innovators** who are successful and those who are **not** is the ability to **fail** and to leverage that failure into a **learning tool** for success.

- As the founder of Honda, **Sochiro Honda**, said:
  - **"Success is 99% failure."**

### How failures lead to success

#### Getting space to redirect and innovate

Failure often allows you to examine what worked or what didn't even more so than success. It can foster your critical and analytical thinking skills, allowing you to innovate, redirect and try another way to execute something the next time. You might consider an option you otherwise wouldn't have if you succeeded on the first try. For example, many inventors and well-known businesspeople used failure as an inspiration to create something better than they originally intended, like modern technologies including iterations of the smartphone, early social media platforms and virtual reality gaming systems.

Redirection also helps you discover more successful options. Think of navigating a maze blindfolded, for example. To find the exit, you likely take many wrong turns, though ultimately they help you move through the maze and get to the exit. Similarly, in life, failing at something might redirect you onto something greater.

#### Earning the opportunity to cultivate courage and resiliency

Those who experience hardship often develop more resiliency, determination and courage than those who don't. Failure rarely means the end of something and usually, it's often the beginning. For example, you might interview for a promotion and have disappointment when you learn another colleague got the job instead. Using the experience to review your talents, skills and

abilities, you might focus on strengthening your professional capabilities and have the courage to apply for the next promotion. Alternatively, your employer might recognize how you handled the situation and create a role specifically with you in mind.

### **Having the option to try again**

Failure can turn into success solely because of the option to try again repeatedly. Determination and focus often increase after experiencing setbacks, especially when you are close to attaining your ambition. You might accomplish your goal on the second attempt or it might take several tries. Even if it feels like it's not working, consider trusting in the process of turning failure into success. It's common to learn more each time you try something, so be willing to take another chance even after experiencing failure.

### **Gaining wisdom and room to learn and progress**

You can often gain new insight, skills and techniques through experiencing hardships or failures. For example, you might work on a technology project that malfunctions the first few days after launch, and your team conducts a thorough study of what went wrong and how to prevent it in the future. If you work on a project with setbacks again, you likely have the capabilities to fix or avoid the issue even more than a colleague whose projects were successful immediately.

## **9.5. Undertaking risk management and cost benefit analyses for each option/idea approved for trial**

### **Risk management**

Risk management is the **identification, evaluation, and prioritization of risks** followed by coordinated and economical application of resources to **minimize, monitor, and control** the probability or impact of unfortunate events or to maximize the realization of opportunities.

### **Cost–benefit analysis**

Cost–benefit analysis, sometimes also called **benefit–cost analysis**, is a systematic approach to estimating the **strengths** and **weaknesses** of alternatives.

## **9.6. Approving innovations**

How could you approve your innovations through agreed processes present in your organization?

### **5 Simple steps to get approval**

#### **1. Study industry trends related to the idea**

Objective: become knowledgeable about the domain your idea is about.

#### **2. Ask for permission to attend (free) webinars and meetups**

Objective: Become even more knowledgeable about the domain, build your network, and make your boss aware that you are interested and serious about the topic.

#### **3. Share your findings with the organization and your boss in a meeting**

Objective: Share your newly obtained insights with your colleagues, position yourself as an enthusiast and expert on the topic, build awareness for the topic among colleagues and your boss, attract potential team members.

#### **4. Ask for permission to explore the topic**

Objective: Get approval to build a team and take action

#### **5. Get approval to work on the project**

Objective: Get the resources and time you need to explore your idea and bring it to fruition

## **Self-Check-2**

### **II. Give short Answer**

1. Define Continuous Improvement.
2. What is the aim of Continuous Improvement?
3. List down the benefits of Continuous Improvement?
4. Define Creativity, Invention and Innovation, explain their difference with example.
5. List down the three basic stages of Innovation.
6. List down the four stages of the creative process.
7. What is risk management?
8. Define Contingency plan.

### **Lo3. Implement innovative processes**

#### **3.1. Promoting continuous improvement**

7 ways to encourage continuous improvement

1. Encourage difficult questions.
  - Good change agents are inquisitive and want to know why things can't be made better.
2. Reward passion.
  - Encourage an environment of change and recognize those that drive it.
3. Celebrate success.
  - Give those that embrace and advocate meaningful change a voice in the organization.
4. Embrace failure.
  - Recognize that some risks will not pay off. Seek lessons that can be applied to future projects.
5. Share your vision.
  - Articulate your vision and create a North Star to guide others. That helps to focus and channel the energy.
6. Walk the talk.
  - Act as a change agent yourself, leading by example. It's not enough to talk about change.
7. Listen
  - Welcome constructive feedback, listen to critics, and tweak your approach when needed.

#### **3.2. Addressing impact of change and consequences**

Change in an organization leads to many positive aspects – that lead to retaining a competitive edge and also remaining relevant in your business area. Change encourages innovation, develops skills, develops staff and leads to better business opportunities, and improves staff morale.

#### **3.3. Ensuring objectives, timeframes, measures and communication plans**

The goal of process improvement is to identify and eliminate weaknesses in your business processes to help you:

- Increase quality and efficiency.
- Eliminate bottlenecks in your operations.
- Reduce costs.

#### **Objectives**

objectives are precise actions or measurable steps individuals and groups take to move closer to the goal.

## **Timeframes**

Time frame is a period of seconds, minutes, days, hours, weeks, months, etc. in which something may happen or in which something may occur. An example of time frame is when a project has two weeks to be completed. Assure the timeframes are met according to the plan.

## **Measures**

A plan or course of action taken to achieve a particular purpose.

## **Communication plan**

A communication plan is a policy-driven approach to providing company stakeholders with certain information. Communication plans are typically used in business settings to ensure all parties have the latest updates on projects, goals and objectives.

### **3.4. Implementing contingency plans in the event of non-performance**

#### **Contingency plan**

A contingency plan, also known colloquially as **Plan B**, is a plan devised for an outcome other than in the **usual plan**. It is often used for **risk management** for an exceptional risk that, though unlikely, would have **catastrophic** consequences.

### **3.5. Following -up failure by prompt investigation and analysis of causes**

#### **Investigation**

An investigation is a thorough search for facts, especially those that are hidden or need to be sorted out in a complex situation. The goal of an investigation is usually to determine how or why something happened.

#### **Investigating and analyzing causes of failure**

If you are to limit the impact of failure, then it will be necessary to carry out prompt investigation and develop appropriate solutions. Minor failure may affect a specific department, or process within your business. However, major failure may result in the breakdown of customer relationships, redundancy of employees, and perhaps even the closure of your business.

You may have to deal with the following types of failure:

- Failure to meet business objectives—
- Failure to attract customers and make sales
- Failure to compete with innovative businesses
- Failure to anticipate and respond to changes in legislation
- Failure to effectively manage business finances
- Failure to prevent insolvency.

### **Considering the impact of failure**

Failure is to be expected in businesses which encourage innovation. However, business owners who take steps to limit and control the impacts may learn a considerable amount from failure. They may identify inefficient procedures and methods of advertising. However, such mistakes can be avoided in the future development of business ventures. Unfortunately, some entrepreneurs are unable to see their way through significant periods of failure. They may incur a considerable financial loss and be deterred from pursuing any other business opportunities. Negative publicity may cause serious damage to the business's image and employees might struggle to find alternative means of employment.

### **The importance of prompt follow-up action**

If detailed contingency plans have been created, then there will be a good chance of responding appropriately to different forms of failure. The implementation of recovery strategies may result in the restoration of a positive mindset and maintenance of high productivity levels. Negative perceptions and personal impacts will be limited as issues are rapidly identified and resolved. There will be a considerable amount of information regarding the reasons for business failure, which could be used to inform future decisions.

### **3.6. Managing emerging challenges and opportunities**

Some emerging challenges for management are:

- Globalization of Business.
- Ethics and Social responsibility.
- Workforce diversity.
- Empowerment.
- Technology.
- Building a Competitive Advantage.
- Development of the environment.
- Quality and productivity.

### **Emerging opportunities**

Emerging opportunities are those that, from an end user perspective, some level of uncertainty exists in the configurability of business cases, thus certain sector sub- segments represent stronger revenue opportunities in the near and medium term for new market entrants.



### **3.7. Evaluating continuous improvement systems and processes regularly**

#### **How do you evaluate continuous improvement systems and processes?**

##### **Continuous Improvement**

- **Plan:**
  - Identify an opportunity and plan for change.
- **Do:**
  - Implement the change on a small scale.
- **Check:**
  - Use data to analyze the results of the change and determine whether it made a difference.
- **Act:**
  - If the change was successful, implement it on a wider scale and continuously assess your results.

### **3.8. Communicating costs and benefits of innovations and improvements**

#### **Cost innovation**

The strategy of deploying the cost advantage enjoyed by players based in emerging economies in radically new ways to offer customers around the world dramatically more utility for less expenditure - will be key to making this step-change.

#### **Advantages of innovation in business**

Some of the key practical benefits of innovation are:

- Improved productivity
- Reduced costs
- Increased competitiveness
- Improved brand recognition and value
- New partnerships and relationships
- Increased turnover and improved profitability

### **Self-Check-3**

#### **III. Give short Answer**

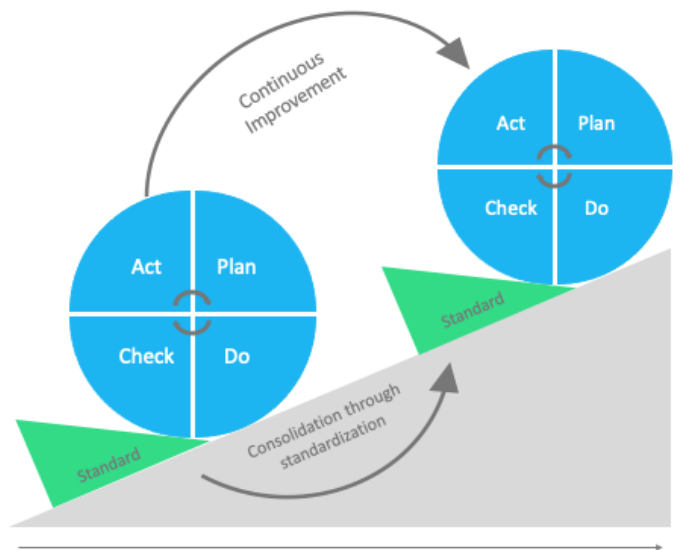
1. List down the ways to encourage continuous improvement.
2. Define Contingency plan.
3. How do you evaluate continuous improvement systems and processes?
4. What is Emerging opportunities?
5. Define Cost innovation.

## What are the most common continuous improvement processes?

1. PDCA – The Deming Cycle
2. Kaizen

### PDCA – The Deming Cycle

- **Plan:**
  - **Define a problem and create hypotheses for causes and solutions**
- **Do:**
  - **Implement a solution**
- **Check:**
  - **Evaluate**
- **Act:**
  - **If the results are not the desired ones, go back to the plan stage. Scale if the results are satisfactory.**



## **Walter Andrew Shewhart**

Walter Andrew Shewhart was an American physicist, engineer and statistician, sometimes known as the father of statistical quality control and also related to the Shewhart cycle. Developed the original concept during the 1920s. His approach was a three-step linear problem-solving method:

- Plan,
- Do,
- See



## **William Edwards Deming**

William Edwards Deming was an American engineer, statistician, professor, author, lecturer, and management consultant. In the 1950s, He developed a method of identifying why some products or processes don't work as hoped. Deming presented in Japan his revised Shewhart's cycle. He brought up the importance of four main steps:

- design,
- production,
- sales and
- research.

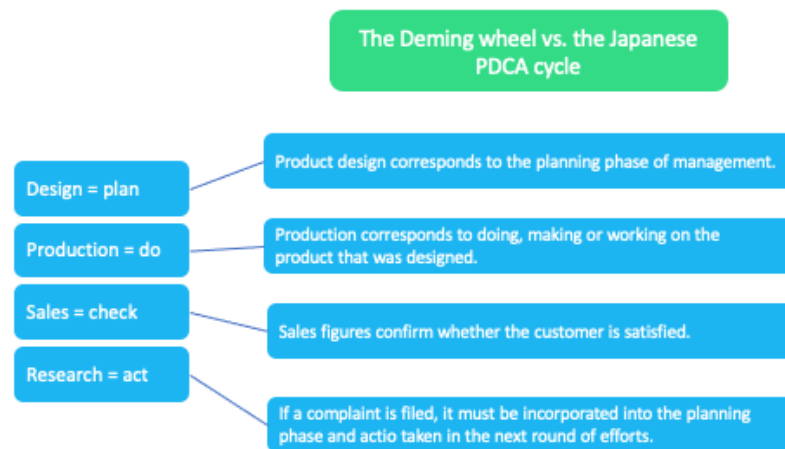


## The Deming wheel VS the Japanese PDCA Cycle

The version we know today as the PDCA cycle came from the Japanese.

First Introduce:

- Tokyo Institute of Technology in 1959.



## What is Kaizen?

Kaizen is a **concept** referring to **business activities** that **continuously improve** all functions and involve all employees from the CEO to the assembly line workers.

Kaizen also applies to processes, such as **purchasing** and **logistics**, that cross organizational boundaries into the **supply chain**.

KAIZEN

改 善

KAI

Change

ZEN

Good  
or  
Better

A Japanese word which means  
Change for better

Continuous Improvement

Kaizen was used only in **businesses**, but now it can be implemented in many fields like:

- **Personal Life**
- **Home Life**
- **Social Life**
- **Work Life**

### **History of Kaizen**

Kaizen was **first practiced in Japanese businesses after World War II**, influenced in part by American business and quality-management teachers, and most notably as part of **The Toyota Way**. It has since spread throughout the world and has been applied to environments **outside business and productivity**.

**Masaaki Imai** is a Japanese organizational **theorist** and management **consultant**, known for his work on **quality management**, specifically on **Kaizen**. 1985 He found Kaizen institute, consulting group that helps western companies:

- **Kaizen Concept**
- **Kaizen System**
- **Kaizen Tool**

Japanese feel that many small continuous changes in the systems and policies bring effective results than few major changes.

### **Dual Nature of Kaizen**

- **Kaizen as an Action Plan**
  - It is all about organizing events focused on improving specific areas within the company. These events involve teams of employees at every level of the organization. Kaizen emphasizes improving the specific areas of the manufacturing floor.
- **Kaizen as a Philosophy**
  - Kaizen is a Japanese term meaning “**change for the better**”. Kaizen is a philosophy that sees improvement in productivity as a gradual and methodical process and focuses on continual improvement throughout all aspects of life.

### **Main Features of Kaizen**

1. Huge number of small changes is better than the large development.
2. Takes ideas from the workers itself.
3. Helps in improving the current state to the predicted future state.
4. No major capital investment.
5. Encourages the workers to take ownership of their own work.

## Why Kaizen is required?

1. Organizational Culture
2. Human Resource
3. Reduces Wastes
4. People are Satisfied
5. Improved Commitment
6. Problem Solving
7. Solutions for improvement

## Principles of Kaizen

1. Improve everything continuously.
2. Abolish old and traditional concepts.
3. See wastes and problems as opportunity.
4. If something goes wrong, correct it.
5. Empower everyone to take part in problem solving.
6. Be transparent.
7. Take opinion from multiple people.
8. Know our customer.
9. Know that improvements have no limits.
10. Be economical.

## Best Practices of Kaizen





## Types of Kaizen

### 1. Point Kaizen

- Point Kaizen is one of the most commonly implemented types of kaizen. This is a very quick approach that can be implemented without much planning.

#### Example:

A medical shop inspection by a superior officer. He finds expired medicines or other small issues and then asks the shop owner to perform a quick Kaizen (5S) to rectify those issues



### 2. Line Kaizen

- Line Kaizen is usually referred to as the spreading of lean from the point. That is, it refers to utilize lean techniques in both streams of the organization, and forming a line between the two.

#### Example:

A short-term kaizen event might be implemented in the planning department of the organization, and also another point kaizen is applied in the procurement department. Planning is upstream from procurement, which directly affects procurement, and constitutes a line kaizen



Procurement department



Planning department

### 3. System kaizen

- System Kaizen is to address system, level problems in an organization. It one of the upper-level strategic planning methods. It is used to develop a vision for the whole organization's future state, leveraging concepts like value stream maps that will result in some planned kaizen events over a long period.

### 4. Plan Kaizen

- It is the next upper level of line kaizen. It is usually called value streams that are several lines connected together. One can see that changes or improvements made to one line gets implemented to other lines or processes present in the plane.

### 5. Cube Kaizen

- Cube Kaizen refers to a situation where all points of the planes are connected to each other, which usually like a cube. There is no disconnection between processes. This may result in lean processes across the whole organization.

## Example of Kaizen

### Restorative kaizen

Improvements are done for the restoration of systems or processes



Before kaizen



Car drivers faced difficulties, every time he or she moved back. He/she had to look towards backside to ensure proper parking

After kaizen



Automated mirrors are placed inside the car, and drivers could park the car easily

### Renovative kaizen

Improvement is done to get a better change in the existing system or process

Before kaizen



Before, people watched television, those TVs used more place and the level of clarity was too less

After kaizen



Now, the TV which we get is the flat HD TV, which uses less place with more features than the previous one

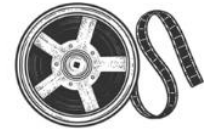
## Innovative kaizen

Technological changes are occurred.  
The entire process is changed while  
implementing this kaizen



### Before kaizen

Before, we could see reels  
where the photographer  
stored all his images



### After kaizen( 1<sup>st</sup> improvement)

CD came into existence,  
where they copied all  
the files into that



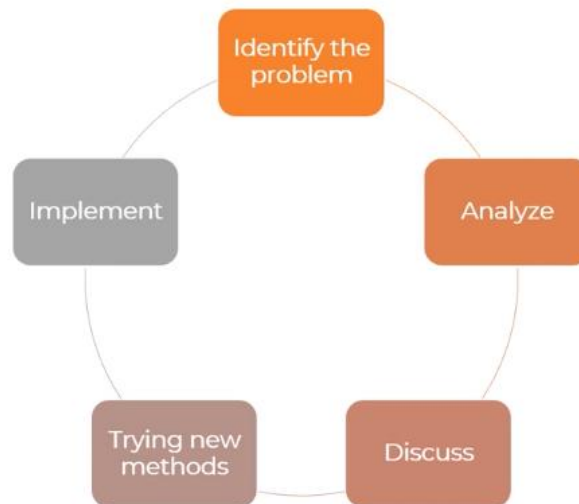
### After kaizen (2<sup>nd</sup> improvement)

Later, Pen drive came  
into existence



## How Kaizen works?

The steps for carrying out  
daily kaizen:

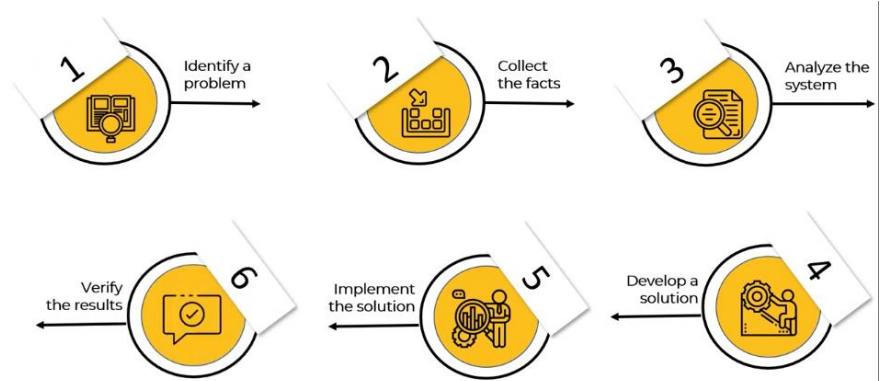


## Main Aspects of Kaizen



## Phases of Kaizen

1. Identify a problem
2. Collect the facts
3. Analyze the system
4. Develop a solution
5. Implement the solution
6. Verify the results



### 1. Identify a problem

- Take Feedback from every employee.
- List the process that requires improvement.
- Not down the problems of every department.
- Shortlist the top 10 problems.

### 2. Collect the facts

- Involve employees and motivate them.
- Create a workplace.
- Gather the information.
- Communicate with managers and other team members.

### **3. Analyze the system**

- Start analyzing the system.
- Form a team of experienced workers.
- Give specific time to analyze.
- Note down the solutions.

### **4. Develop an Appropriate Solution**

- Try to bring out a suitable solution.
- Perform the activities in groups as everyone can give inputs.
- Remember that time is critical.
- Note down each solution for the future references.

### **5. Implement the Solution**

- Start on Small- Scale.
- Don't ignore the plan, and stop overthinking.
- Take small steps at a time.
- Planned and controlled implementation required.

### **6. Verify the Implementation**

- Ensure proper implementation is done.
- Verify from ground level.
- Check if output matches the expected results.
- Conduct the audits.

## **Pillars of Kaizen**

1. Housekeeping
2. Waste Elimination
3. Standardization

## 1. Housekeeping



Housekeeping is a process of managing Gemba (workplace) for continuous improvement



For proper housekeeping, the 5S framework is used. The term "5 S" is derived from the first letters of various Japanese words known as five practices that lead to a clean workstation

## 2. Waste Elimination



Any non-value-adding resource is classified as Muda (waste)

### 7 wastes of lean management

- Waste of transportation
- Waste of Waiting
- Waste of Over-processing
- Waste of Motion
- Waste of Defects
- Waste of overproduction

### 5 Principles of waste elimination

- Make the waste visible
- Identify waste in each workstation
- Be aware of waste
- Measure the waste
- Improve the processes



### 3. Standardization



Standardization is the practice of setting, communicating, following, and improving standards and standard work

- One of the best ways to achieve consistent results and minimize mistakes is to follow the standard work
- To improve the results, we have to improve the process
- One need to have standards in place before we try to improve it

### What are Kaizen Events?



The APICS Dictionary defines a kaizen event as the “implementation arm of a lean manufacturing program”

#### Kaizen Events

- ✓ Kaizen evets are about action
- ✓ These are carried out in one week
- ✓ This involves breaking down a process, removing the unnecessary elements, and then putting it back
- ✓ The process involves the skill sets of everyone who are involved

A successful kaizen event will need strong leadership and thoughtful planning ahead of time

### Why are kaizen events performed?

- ➡ Eliminate wastes
- ➡ Focuses on customer needs
- ➡ Efficient method to improve processes
- ➡ Encourages non judgmental thinking

### What are the areas targeted by kaizen?

- ➡ Uncompleted stages
- ➡ Areas with significant market
- ➡ Areas of financial impact
- ➡ Services that do not meet customer's satisfaction
- ➡ Products with substantial work in progress

### How are kaizen events performed?

- 1 Select the team members
- 2 Set time and place to perform
- 3 Examine and map the process
- 4 Develop proper ideas
- 5 Implement those ideas
- 6 Verify the implementation





## **Self-Check-4**

### **IV. Give short Answer**

1. What are the most common continuous improvement processes?
2. Explain in detail PDCA Deming cycle.
3. What is Kaizen? give examples.
4. In what area Kaizen can be implemented?
5. Why Kaizen is required?
6. What are the Principles of Kaizen?
7. What are the Best Practices of Kaizen?
8. List down the types of Kaizen.
9. List down the Main Aspects of Kaizen.
10. List down the Phases of Kaizen.
11. List down Pillars of Kaizen with detail explanation.
12. What are Kaizen Events?