UNIT-II
TQM PRINCIPLES
LEADERSHIP

Definition:

Leadership has been described as the "process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task".

Alan Keith: "Leadership is ultimately about creating a way for people to contribute to making something extraordinary happen."

Ken "SKC" Ogbonnia: "effective leadership is the ability to successfully integrate and maximize available resources within the internal and external environment for the attainment of organizational or societal goals."

Ann Marie E. McSwain: "leadership is about capacity: the capacity of leaders to listen and observe, to use their expertise as a starting point to encourage dialogue between all levels of decision-making, to establish processes and transparency in decision-making, to articulate their own values and visions clearly but not impose them. Leadership is about setting and not just reacting to agendas, identifying problems, and initiating change that makes for substantial improvement rather than managing change."

These three definitions talk about certain common things. They are resources, utilization of resources, managing constraints and getting extraordinary results. These definitions also talk about motivating people to work in unison to create results.

Concepts of Leadership

Stephen R Covey: The 7 Habits of Highly Successful People

1. Be Proactive: Proactive people think beforehand and are ready to face a situation. Reactive people react as per the situation and react on whims and emotions. A proactive person can plan beforehand for an eventuality. If you are well prepared then you can face a situation or solve a problem more efficiently.

2. Begin with the end in Mind: "If you don't know where to go then you will reach nowhere" goes an old saying. Start a task with set goals. Goals are important as they tell you where to go. They help in focusing your approach as well. Remember the famous incident from Mahabharata where Guru Dronacharya asks his disciple about what they could see during target practice. Arjuna gives the most perfect answer as he was focusing on the target. Because of his focused approach Arjuna became one of the best archers of his time.

3. Put First Things First: Because of multitude of tasks and assignments one needs to prioritize. This helps in giving more attention to more important things at hand.

4. Think win-win: Think about mutual benefits rather than your own benefit alone. Everybody wants to have an upper hand in life and in business dealings. But this is practically not possible. So best way is to find is the middle of the road.

5. Seek first to understand, then to be understood: First give other people ample time to express themselves. This will help on many fronts. The other person gets enough opportunity to say what he wants to say. You get an opportunity to understand other's perspective. You get enough time to strategize accordingly.

6. Synergy: The best example of team work can be learnt from a pleasant orchestra or 'jugalbandi' in Indian classical music. Especially in Indian classical music you will observe how maestros bury their egos and come out with astounding performances.

7. Sharpen the Saw: Skill building or practice is very important. Nobody is perfect and perfection is a thing which can never be achieved in one's lifetime. Moreover, it always pays to practice as much as you can.

STRATEGIC QUALITY PLANNING

Seven Steps to Strategic Planning

There are seven basic steps to strategic quality planning. The process starts with the principle that quality and customer satisfaction are the center of an organizations future. It brings together all the key stakeholders.

1. Customer needs: The first step is to discover the future needs of the customers. Who will they be? Will your customer base change? What will they want? How will the organization meet and exceed expectations?

2. Customer positioning: Next, the planners determine where the organization wants to be in relation to the customers. Do they want to retain, reduce, or expand the customer base? Products or services with poor quality performance should be targeted for breakthrough or eliminated. The organization needs to concentrate its efforts on areas of excellence. *No two individual is same, so every type of customer should be treated as per his/her profile. You cannot sell a premium product to a price conscious customer.*

3. Predict the future: Next, the planners must look in to their crystal balls to predict future conditions that will affect their product or service. Demographics, economic forecasts and technical assessments or projections are tools that help predict the future.More than one organizations poduct or service has become obsolete because it failed to foresee the changing technology. *If the top management can foresee the future then it helps enable the organization to prepare for future changes. Let us take example of SONY. With rapid change in technology SONY has changed its product portfolio, so it is now MP3 player instead of Walkman which we get from SONY.*

4. Gap analysis: Gap analysis is about the difference between what needs to be done and what are we currently doing. It can give a clue about whether the organization should increase or decrease capacity for a particular product.

5. Closing the gap: If there are gaps then long term plans should be about how to fill that gap.

6. Alignment (with vision and mission): Whatever quality goals an organization is chalking out it should not lose focus from the long term vision and mission of the organization.

7. Implementation: Once every plan about goals is ready then the next step should be to plan about the methodologies of implementation.

QUALITY STATEMENTS

The quality statements include the

1. Vision statement

2. Mission statement and

3. Quality policy statement.

❖ Once developed, they are only occasionally reviewed and updated.

❖ They are the part of the strategic planning process.

❖ The utilization of the three statements varies considerably from organization to organization.

❖ **Vision Statement**

- The vision is a short declaration of what an organization <u>aspires to be tomorrow.</u>

- It is the <u>ideal state</u> that might never be reached but which we continually strive to achieve.

- Successful visions are timeless, inspirational and become deeply shared within the organization.

- Successful vision provides a guide line for decision making.

- It is important that the leader articulate and act upon the vision and those employees understand the vision and can connect their work with the well-being of the organization.

❖ **Mission Statement**

- The mission statement answers the following questions: who we are, who are the customers, what we do, and how we do it.

- This statement is usually one paragraph or less in length, is easy to understand and describes the function of the organization.

- It provides a clear statement of purpose for employees, customers and suppliers.

❖ **Quality Policy Statement**

- The quality policy is a guide for everyone in the organization as to how they should provide products and services to the customers.

- It should be written by the CEO with feedback from the workforce and be approved by the quality council.

- Common Characteristics are

  ▪ Quality is first among equals

  ▪ Meet the needs of the internal and external customers

  ▪ Equal or exceed the competition

  ▪ Continually improve the quality

  ▪ Include business and production practices

  ▪ Utilize the entire workforce

CUSTOMER SATISFACTION

❖ Customers are important asset to the organization, satisfied customers will buy more, and buy more frequently, and pay their bill promptly.

❖ In a manufacturing and service organization, customer satisfaction is considered as a measure of quality.TQM implies an organizational drive with meeting or exceeding customer needs.

❖ Understanding the customer's needs and expectations is essential to winning new business.

❖ To attain this level, the organization should examine their quality system to respond to their ever changing customer's needs.

A simple definition of customer satisfaction is illustrated below

Teboul model
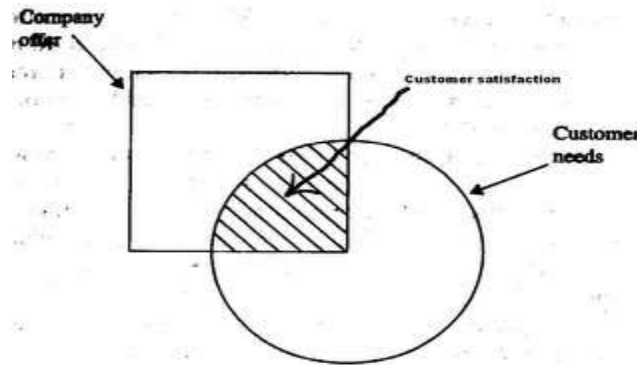
Characteristics of customer satisfaction.

1. It is far from simple.
2. It is not an objective statistic, but more of feeling and attitude.
3. Therefore like people's opinion and feeling, it is subjective by nature.
4. Because of this subjective nature, it is difficult to measure.
5. The measurement of customer satisfaction is not precise.
6. The customer satisfaction should not be viewed in vacuum, i.e., it should be compared with the level of satisfaction they have with competitor's product are service.

Types of customers.

1. Internal customers - each of them receives a product or service and in exchange, providers a product or service.
2. External customers - one who uses the product or service, the one who purchase the product, or the who influences the sale of the product.

CUSTOMER PERCEPTION OF QUALITY.

In an organization there is no acceptable quality level because the customer's needs, values and expectations are constantly changing and becoming more demanding.

An American Society for Quality (ASQ) survey reveals the following end-user perception of quality

1.Performance
2.Features

3.Service

4. Warranty

5. Price

6. Reputation.

CUSTOMER COMPLAINTS

- ❖ Unlike the customer's feedback the customer complaints are reactive, and they are important in gaining data on customer perceptions.
- ❖ A dissatisfied customer can easily become a lost customer because of their frustrations. This customer dissatisfaction becomes a measure for organizational process improvement measures.
- ❖ Every single complaint should be accepted, analyzed, and acted upon to again win over customer's confidence. Since more than 50% of the dissatisfied customers will buy again if they are complaint has been heard and resolved.
- ❖ By adopting a positive approach the complaints can be seen as an opportunity to obtain information and provide a positive service to the customer.

Ways to get customer feedback or complaint

1. **Comment Card**
   - ❖ A low cost method of obtaining feedback from customers involves a comment card, which can be attached to the warranty card and included with the product at the time of purchase.
   - ❖ The intent of this card is to get simple information such as name, address, age, occupation and what influenced the customer's decision to buy the product.
   - ❖ Generally people respond only if something very good or very bad has happened.

2. **Customer Questionnaire**
   - ❖ A customer questionnaire is a popular tool for obtaining opinion and perceptions about an organization and its products and services
   - ❖ However they can be costly and time consuming.
   - ❖ Surveys may be administered by mail or telephone**.**
   - ❖ In the questionnaire the customer is asked to furnish answers relating to the quality of product and services.

3. **Focus Groups**
   - ❖ Customer focus groups are a popular way to get feedback, but they too can be very expensive**.**
   - ❖ These groups are very effective for gathering information on customer expectations and requirements.
   - ❖ A group of customers is assembled in a meeting room to answer a series of questions.
   - ❖ These carefully structured questions are asked by a skilled moderator.

4. **Toll-Free Telephone Numbers**
   - ❖ Toll-free telephone numbers are an effective technique for receiving complaint feedback.
   - ❖ Organizations can respond faster and more cheaply to the complaint.

5. **Customer Visits**
   - ❖ **Visit**

Handling the customer complaints

1. Investigate customer's experiences by actively receiving the customer feedback and then acting promptly.
2. Develop procedures for complaint resolution that include empowering front-line employee.
3. Analyze complaints; try to put them in a category for speedy response.
4. Work to identify process and material variations and then eliminate the root cause.'more inspection' is not a corrective action.
5. After receiving the response, a senior manager should contact the customer and strive top resolve the concern
6. Establish customer satisfaction measures and constantly monitor them
7. Communicate complaint information, as well as the results of all inquiries and solutions, to all people in the organization.
8. Provide a monthly complaint report to the quality council for their evaluation and if needed, the assignment of process improvement teams.
9. Identify customer's expectations in advance rather than afterward through complaint analysis.

CUSTOMER RETENTION

❖ Customer retention represents the activities that produce the necessary customer satisfaction which in turn creates the customer loyalty.
❖ Customer retention moves customer satisfaction to the next level by determining what is truly important to the customers and making sure that the customer satisfaction system focuses valuable resources on things that are important to the customer.
❖ Customer retention is the connection between customer satisfaction and the bottom line.
❖ World-class companies know that continuous improvement and customer satisfaction should go hand-in-hand.
❖ Improved service to the customer is a costlier affair, so an organization must determine its return on the service investment. For this the important service elements that significantly improve revenues and market share should be determined.
❖ One survey indicates, it requires five times of effort to win a new customer than retaining a present customer. In this context customer retention is important for organizational success.

EMPLOYEE INVOLVEMENT

❖ Japanese management emphasizes the need to consider employee as a valuable resources rather than treating them as a mere tools for production.
❖ Employee involvement is one approach to improve quality and productivity.
❖ It is not an replacement for management nor is it the final word in quality improvement, it aims at better meeting of organizational goals at all levels.

1.MOTIVATION

Knowledge of motivation helps us to understand the utilization of employee involvement to achieve process improvement.

Theories of Motivation

He explained the motivation in terms of a hierarchy of needs and that there were five levels. These are survival, security, social, esteem, and self-actualization.

Maslow's Hierarchy of Needs

It is important to note that as employees move up the hierarchy, they will immediately revert back to the previous level if they feel threatened.

HERZBERG'S TWO FACTOR THEORY

Hertzberg extends the Maslow's theory by using empirical research oin employee motivation.

- ❖ He found that people were motivated by the motivators (intrinsic factors) like recognition, responsibility, achievement, advancement and the work itself.
- ❖ In addition he found that bad feelings were associated with preventable dissatisfiers or hygiene factors (extrinsic factors) like low salary, minimal fringe benefits, poor working conditions, ill-defined organizational policies and mediocre (ordinary) supervision.
- ❖ He also explained that the presence of extrinsic factors (for example good working condition) does not produce any motivation but their absence will create dissatisfaction among employees.
- ❖ In a same manner the absence of intrinsic factors (for example advancement) does not produce any dissatisfaction but their presence will provide strong level of motivation.

How to motivate work force
1. Know thyself

2. Know your employees
3. Establish a positive attitude
4. Share the goals
5. Monitor progress
6. Develop interesting work
7. Communicate
8. Celebrate success

2.EMPOWERMENT

The dictionary meaning of the term empowerment is to invest people with authority. Its purpose is to tap the enormous potential that lies within every worker.

An operational definition is as follows:
Empowerment is an environment in which people have the ability, the confidence, and the commitment to take the responsibility and ownership to improve the process and initiate the necessary steps to satisfy customer requirements within well defined boundaries in order to achieve organizational values and goals.

Empowerment is nothing unusual; people generally want to be more in charge of their own jobs and carriers. After all, they do that successfully in their personal lives every day. Most people appreciate and value the trust and responsibility. This empowerment helps greatly in eliminating resistance to changes.

Empowerment is different from delegation or job enrichment, which means distributing or entrusting work to others. In empowerment employee is held responsible for accomplishing a whole task.i.e. Employee becomes process owner, thus not only responsible but also accountable.

Three conditions are necessary for empowering employees
1. Everyone must understand the need for change
2. The system needs to change to the new paradigm(model/standard)
3. The organization must enable its employees.

3. TEAMS

- ❖ Teams are very effective in solving all quality and productivity problems.
- ❖ Team is defined as a group of people working together to achieve common objectives or goals.
- ❖ Teamwork is the cumulative actions of the team during which each member of the team subordinates his interests and opinions to fulfill the objectives or goals of the group.
- ❖ Many heads are better than one, especially in meeting ever-changing customer needs.
- ❖ Each member of the team have special ability that can be used for the problem. Many processes are so complex that one person cannot able solve completely.
- ❖ Based on the synergic effect, whole is greater than sum of its parts. Team work is better than sum of its member contribution.

❖ Team builds a rapport with each other that allows everyone to do a better job.
❖ Teams provide the vehicle for improved communication.

Types of teams

· Process improvement teams
· Cross-functional teams
· Natural work teams
· Self-directed/ self managed teams

Characteristics of successful teams

Sponsor
Team charter
Team competition
Training
Clear objectives
Accountability
Well-defined decision procedures
Resources
Trust
Effective problem solving
Open communication
Appropriate leadership
Balanced participation
Cohesiveness.

4. RECOGNITION AND REWARD

❖ **Recognition** is a form of employee motivation in which the organization publicly acknowledges the positive contributions an individual has made to the success of the organization.
❖ This acknowledgement is delivered using verbal and written praise and may include symbolic items such as certificates and plaques.
❖ **Reward** is something tangible such as theater tickets, dinner for two, or a cash award to promote desirable behaviour.
❖ *Recognition and reward go together to form a system for letting people know they are valuable members of the organization.*
❖ People like to be recognized, either as a team or individually.
❖ A persons feeling of achievement, value to the organization, knowing the organization cares and having peer recognition may be more important than any reward.

Recognition Includes

❖ Pictures on the bulletin board
❖ Articles in newsletters or newspapers
❖ Letters to families

- ❖ Making a presentation to management
- ❖ Passing along compliments from others
- ❖ Personal phone calls or notes
- ❖ Placing positive notes in folders
- ❖ Increased responsibility

Rewards
Individual Rewards
- ❖ Better parking space
- ❖ Dinner out
- ❖ Gift certificates
- ❖ Gift to charity in the name of the recipient
- ❖ Washing an employee's car during lunch hour
- ❖ Trips
- ❖ Event tickets

Group Rewards
- ❖ Includes an outing such as a ball game, bowling and movies
- ❖ Group lunch or dinner

> *"Cash awards are also effective motivators for individual and team awards."*

5. PERFORMANCE APPRAISAL
- ❖ The purpose of performance appraisal is to let employees know how they are doing and provide a basis for promotions, salary increases, counseling and other purposes related to an employee's future.
- ❖ There should be a good relationship between the employee and the appraiser.
- ❖ Employees should be made aware of the appraisal process, what is evaluated and how often.
- ❖ Employees should be told how they are doing on a continuous basis and not just at appraisal time.
- ❖ The appraisal should point out strengths and weaknesses as well as how performance can be improved.
- ❖ Appraisal nourish short term performance and destroy

<u>CONTINUOUS PROCESS IMPROVEMENT</u>

PDSA CYCLE
- ❖ The concept was first given by Deming and later it was developed by Shewhart.
- ❖ It is also known as **Deming cycle** or **PDCA cycle.**
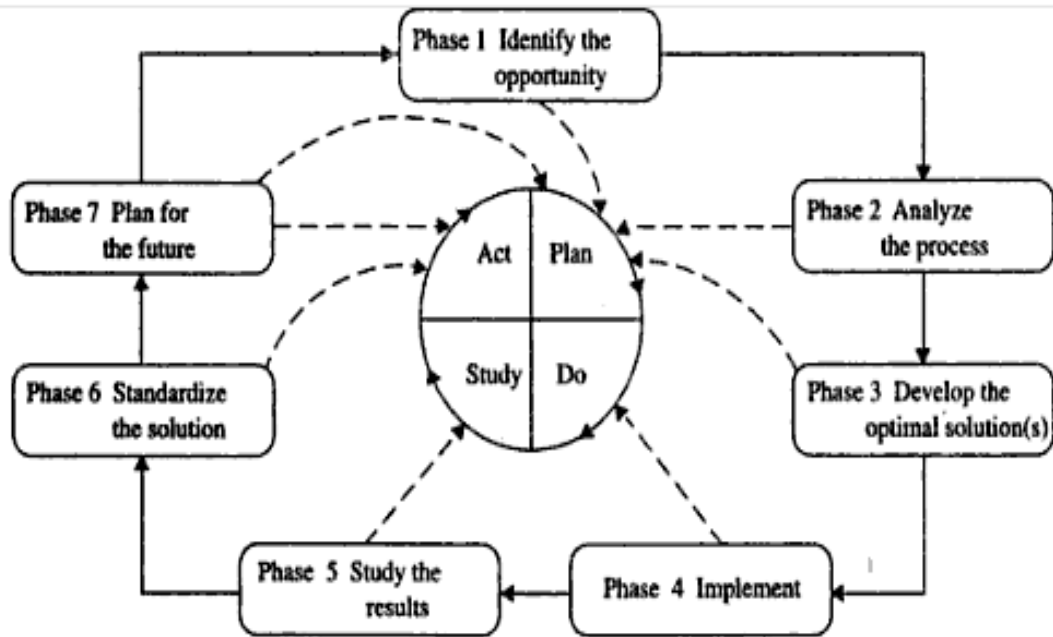
Identify the opportunity:
- The objective of this phase is to identify and prioritize opportunities for improvement.
- It has three parts
  - ✓ Identify the problem
  - ✓ Form the team
  - ✓ Define the scope.

Analyze the current process:
- The objective of this phase is to understand the process and how it is currently performed.
- Key activities are to define process boundaries outputs and customers, inputs and suppliers and process flow, determine levels of customer satisfaction and measurements needed, gather data and identify root causes.
- With the help of process flow diagram the team will
  - ✓ Establish performance measures with respect to customer requirements.
  - ✓ Determine data needed to manage the process
  - ✓ Establish regular feedback with customers and suppliers.
  - ✓ Establish measures for quality/cost/time of inputs and outputs.
- Once the target performance measures are established, the team can collect all available data and information.
- Gathering data by the team
  - ✓ Helps confirm that a problem exists
  - ✓ Enables the team to work with facts
  - ✓ Makes it possible to establish measurement criteria for baseline
  - ✓ Enables the team to measure the effectiveness of an implemented solution.
- The team should develop a plan that includes input from internal and external customers and answers the following questions
  - ✓ What problem or operation do we want to learn about?
  - ✓ What are the data used for?

- ✓ How many data are needed?
- ✓ What conclusions can be drawn from the collected data?
- ✓ What action should be taken as a result of the conclusion?

Develop the optimal solution:
- The objective of this phase is to establish potential and feasible solution and recommend the best solution to improve the process.
- Once all the information is available the project team begins it search for possible solutions.
- In this phase creativity plays the major role and brainstorming is the principle technique.
- There are three types of creativity
    - ✓ Create new processes
    - ✓ Combine different processes
    - ✓ Modify the existing processes

Implement Changes:
- Once the best solution is selected it should be implemented.
- This phase has the objective of preparing the implementation plan, obtaining approval and implementing the process improvements.
- Although the team has the authority in implementing the solution but it has to get approval from the quality council.
- If such approval is needed from the quality council, the team has to give a written or oral report.
- The report should fully describe about
    - ✓ Why will it be done?
    - ✓ How will it be done?
    - ✓ When will it be done?
    - ✓ Who will do it?
    - ✓ Where will it be done?
- The length of the report is determined by the complexity of the change.
- Simple changes may require only an oral report, whereas other changes require a detailed written report.

Study the Results:
- This phase has the objective of monitoring and evaluating the change by tracking and studying the effectiveness of the improvement efforts through data collection and review of progress.
- The team should meet periodically during this phase to evaluate the results to see that the problem has been solved or if fine tuning is required.
- If the team is not satisfied, then some of the phases will need to be repeated.

Standardize the solution:
- Once the team is satisfied with the change, it must be institutionalized by positive control of process, process certification and operator certification.
- Positrol (positive control) assures that the important variables are kept under control.
- It specifies that what, who, how, where and when of the process and is an updating of the monitoring activity.

Plan for the future:
- This phase has the objective of achieving improved levels of process performance.

- Everyone in the organization is involved in a systematic, long term endeavor to constantly improve quality by developing processes that are customer oriented, flexible and responsible.

5S PRINCIPLE
SEIRI - Tidiness
SEITON - Orderliness
SEISO - Cleanliness
SEIKETSU-Standardization
SHITSUKE - Sustaining the discipline or self-discipline

KAIZEN
- Value added and non-value added work activities.
- Muda: which refers to seven classes of waste-overproduction, delay, transportation, processing, inventory, wasted motion and defective parts
- Principles of motion study and the use of cell technology.
- Documentation of standard operating procedures.
- The five S's for workplace organization.
- Visual management by means of virtual displays that everyone in the plant can use for better communication.
- Just in time principles to produce only the units in the right quantities at the right time and with the right resources.
- POKA-YOKE to prevent or detect errors.
- Team dynamics, which includes problem solving, communication skills and conflict resolution.

SUPPLIER PARTNERSHIP

Principles of Customer Supplier Relations By Ishikawa
- Both the customer and the supplier are fully responsible for the control of quality.
- Both the customer and the supplier should be independent of each other and respect each other's independence.
- The customer is responsible for providing the supplier with clear and sufficient requirements, so that the supplier can know precisely what to produce.
- Both the customer and the supplier should enter in to a non-adversarial contract with respect to quality, quantity, price, delivery method and terms of payments.
- The supplier is responsible for providing the quality that will satisfy the customer and submitting necessary data upon the customer's request.
- Both the customer and the supplier should decide the method to evaluate the quality of product or service to the satisfaction of both parties.
- Both the customer and the supplier should establish in the contract the method by which they can reach an amicable settlement of any disputes that may arise.
- Both the customer and the supplier should continually exchange information sometimes using multi functional teams in order to improve the product or service quality.

- Both the customer and the supplier should perform business activities such as procurement, production and inventory planning, clerical work and systems so that an amicable and satisfactory relationship is maintained.
- When dealing with business transactions, both the customer and the supplier should always have the interest of the end user in mind.

Partnering

❖ Partnering is a long term commitment between two or more organizations for the purpose of achieving specific business goals and objectives by maximizing the effectiveness of each participant's resources.

3 key elements to a partnering relationship
❖ Long term commitment
❖ Trust
❖ Shared Vision

Sourcing
❖ Sole
❖ Multiple
❖ Single

Supplier Selection is based on
❖ Management philosophy of the organization
❖ Stable management of the supplier
❖ High technical standards with future technological innovations
❖ Raw materials and parts required by the purchaser meet the quality specifications
❖ Price is right and the delivery dates can be met
❖ Supplier has an effective quality system
❖ When supplier has a track record of customer satisfaction and organization credibility.

Supplier Rating
It is based on
❖ Quality
❖ On time delivery
❖ Service
❖ Internal Structure
❖ Review reports
❖ Customer satisfaction

Example: General Motors uses the traffic light to rate their suppliers
Red- Problem
Yellow- Potential Problem
Green - Ok

Relationship Development

The previous topics contribute to the establishment of the relationship and inspection, training, teams, recognition and reward contribute to the maintainability and growth of the relationship

1. **Inspection**

   The goal of inspection is to eliminate, substantially reduce or automate the inspection activity.

4 phases of inspection
   ❖ 100% inspection
   ❖ Sampling
   ❖ Audit
   ❖ Identity check

2. **Training**
3. **Team approach**
4. **Recognition**