


# MODULE - 10

QUALITY

MANAGEMENT

# What is Quality management?

Quality management is **the act of overseeing all activities and tasks that must be accomplished to maintain a desired level of excellence.** This includes the determination of a quality policy, creating and implementing quality planning and assurance, and quality control and quality improvement.



Quality management consists of four key components, which include:

- Quality Planning - The process of identifying the quality standards relevant to the project and deciding how to meet them.
- Quality Improvement - The purposeful change of a process to improve the confidence or reliability of the outcome.

➤ Quality Control - The continuing effort to uphold a process' integrity and reliability in achieving an outcome.

➤ Quality Assurance - The systematic or the planned actions necessary to offer sufficient reliability that a particular service or product will meet the specified requirements.

The aim of quality management is to ensure that all the organization's stakeholders work together to improve the company's processes, products, services, and culture to achieve the long-term success that stems from customer satisfaction.

# PRINCIPLES OF QUALITY MANAGEMENT

**Customer Focus:** The primary focus of any organization should be to meet and exceed the customers' expectations and needs.

-When an organization can understand the customers current and future needs and cater to them, it results in customer loyalty, which in turn increases revenue

-The business is also able to get new customer opportunities and satisfy them. When business processes are more efficient, quality is higher and more customers can be satisfied.



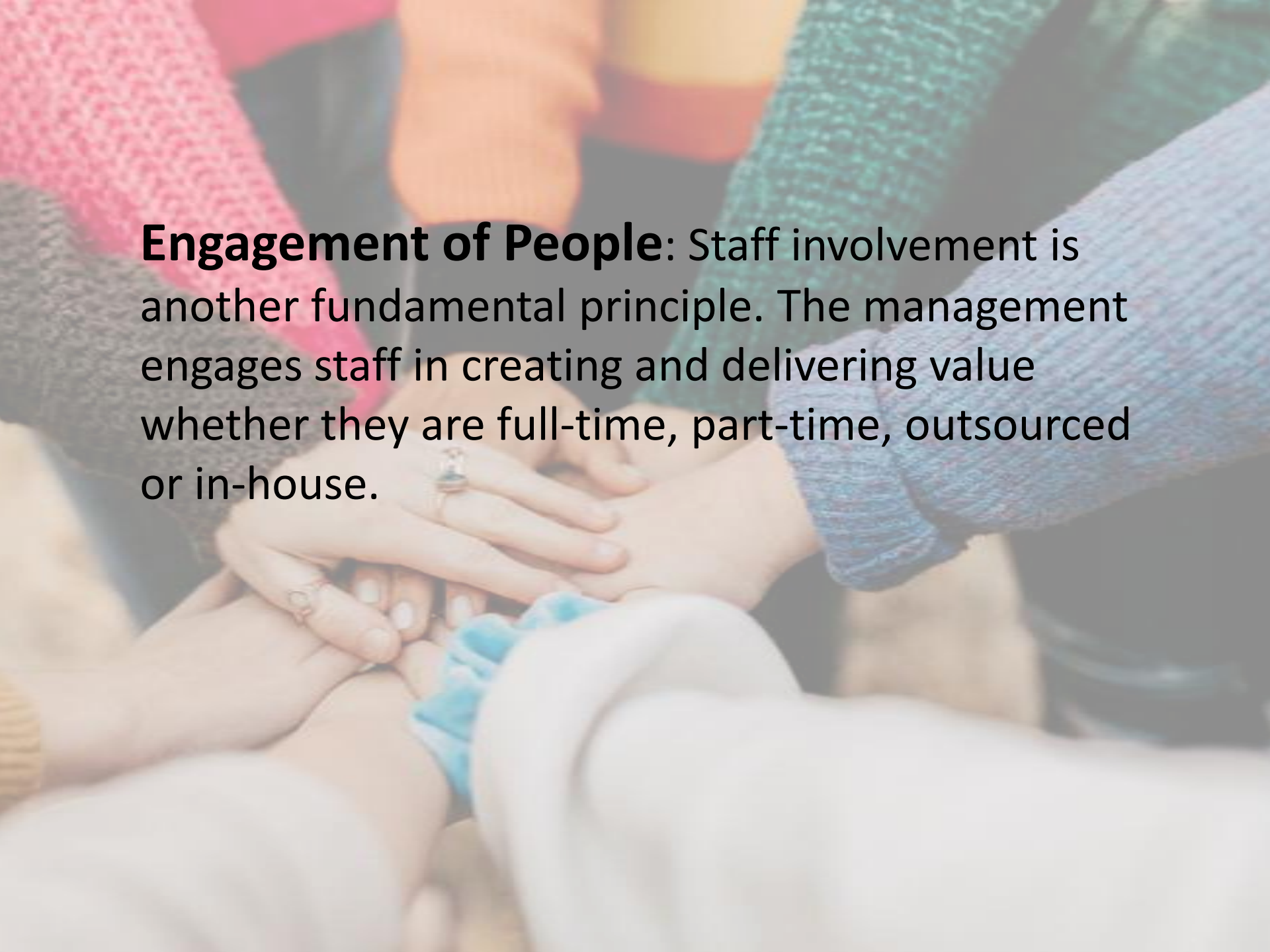


**Leadership:** Good leadership results in an organization's success. Great leadership establishes unity and purpose among the workforce and shareholders.

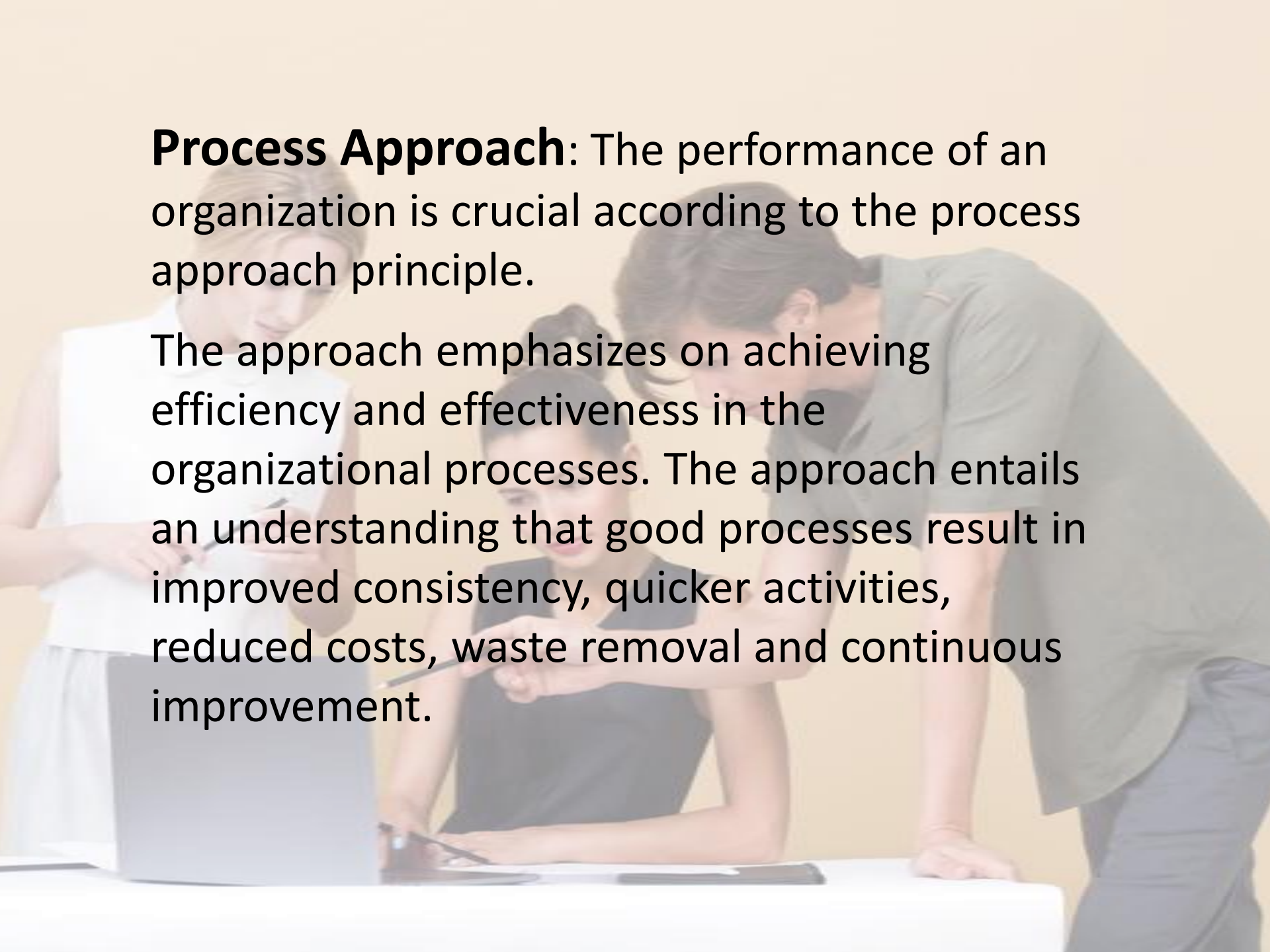
Creating a thriving company culture provides an internal environment that allows employees to fully utilize their potential and get actively involved in achieving its objectives.

The leaders should involve the employees in setting clear organization goals and objectives. It motivates employees, who can significantly improve their productivity and loyalty.




A close-up photograph of several people's hands stacked together in a circle, symbolizing teamwork and engagement. The hands are of various skin tones and are wearing different colored sleeves (pink, orange, teal, blue, white). The background is blurred, focusing attention on the hands.

**Engagement of People:** Staff involvement is another fundamental principle. The management engages staff in creating and delivering value whether they are full-time, part-time, outsourced or in-house.



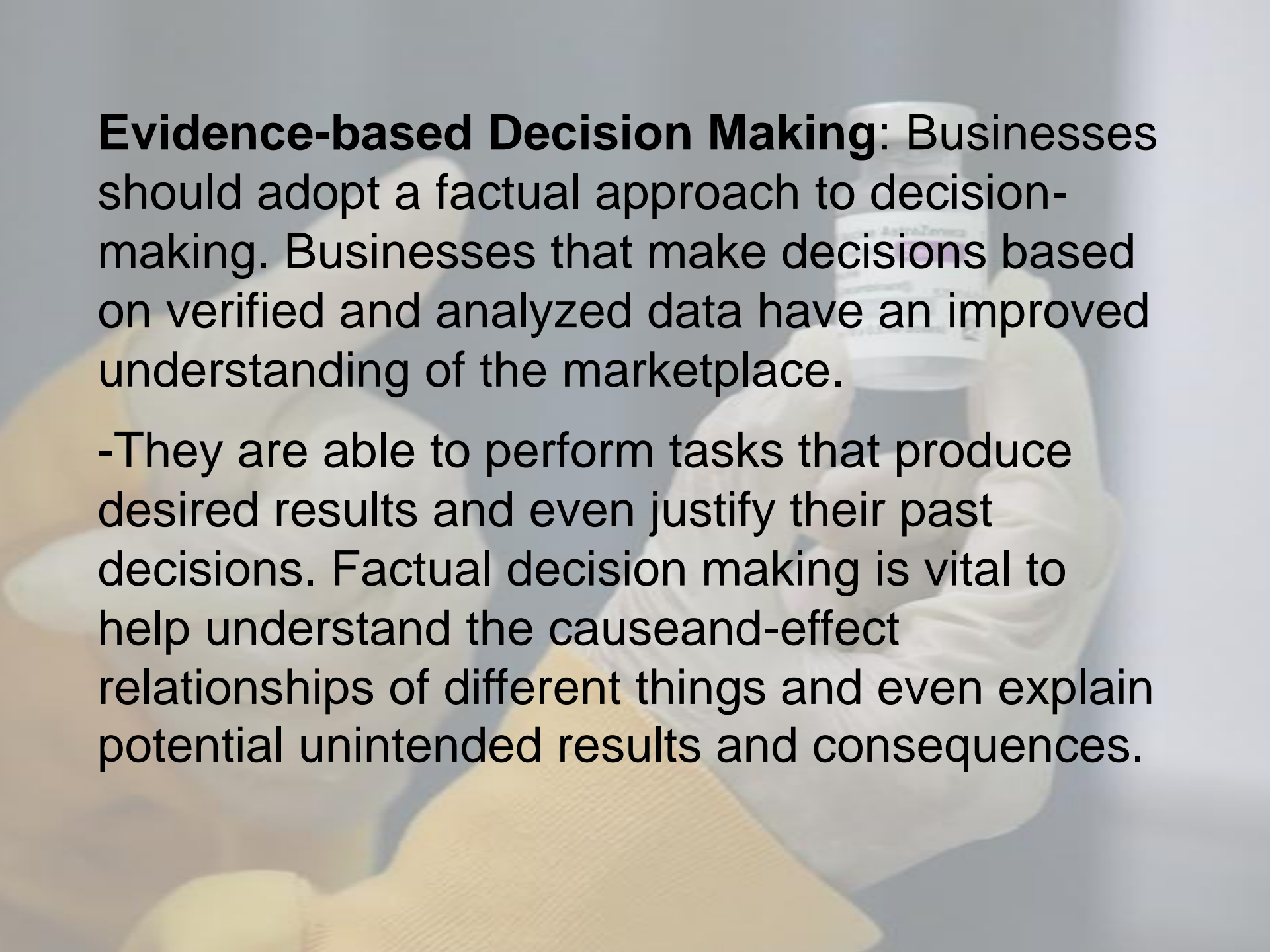
**Process Approach:** The performance of an organization is crucial according to the process approach principle.

The approach emphasizes on achieving efficiency and effectiveness in the organizational processes. The approach entails an understanding that good processes result in improved consistency, quicker activities, reduced costs, waste removal and continuous improvement.

An illustration of two stylized human figures shaking hands. The figure on the left is wearing an orange long-sleeved shirt and grey pants. The figure on the right is wearing a purple long-sleeved shirt and grey pants. They are positioned on either side of a large, light blue speech bubble that contains the text. The background is white with a faint, light blue circular glow behind the figures.

**Continuous Improvement:** Every organization should come up with an objective to be actively involved in continuous improvement.

-Businesses that improve continually experience improved performance, organizational flexibility and increased ability to embrace new opportunities. Businesses should be able to create new processes continually and adapt to new market situations.

A person wearing a white lab coat is holding a white pill bottle. The background is a soft, out-of-focus blue and white. The text is overlaid on the image.

**Evidence-based Decision Making:** Businesses should adopt a factual approach to decision-making. Businesses that make decisions based on verified and analyzed data have an improved understanding of the marketplace.

-They are able to perform tasks that produce desired results and even justify their past decisions. Factual decision making is vital to help understand the causeand-effect relationships of different things and even explain potential unintended results and consequences.

**Relationship Management:** Relationship management is about creating mutually beneficial relations with supplier and retailers. Different interested parties can impact the company's performance.

The organization should manage the supply chain process well and promote the relationship between the organization and its suppliers to optimize their impact on the company's performance.

-When an organization manages its relationship with interested parties well, it is more likely to achieve sustained business collaboration.



# Benefits of Quality Management

- ✓ It helps an organization achieve greater consistency in tasks and activities that are involved in the production of products and services.
- ✓ It increases efficiency in processes, reduces wastage and improves the use of time and other resources.



- ✓ It helps improve customer satisfaction.
- ✓ It enables businesses to market their business effectively and exploit new markets.
- ✓ It makes it easier for businesses to integrate new employees and thus helps businesses manage growth more seamlessly.
- ✓ It enables a business to continuously improve their products, processes, and systems.

# METHODS

❑ In the following list are methods of quality management and techniques that incorporate and drive quality improvement: ISO 9004:2008 - guidelines for performance improvement. ISO 9001:2015- a certified quality management system (QMS) for organisations who want to prove their ability to consistently provide products and services that meet the needs of their customers and other relevant stakeholders.

❑ ISO 15504-4: 2005-information technology process assessment Part 4: Guidance on use for process improvement and process capability determination.

- ❑ QFD-quality function deployment, also known as the house of quality approach.
- ❑ Kaizen Japanese for change for the better; the common English term is continuous improvement.
- ❑ Zero Defect Program-created by NEC Corporation of Japan, based upon statistical process control and one of the inputs for the inventors of Six Sigma. Six Sigma Six Sigma (68) combines established methods such as statistical process control, design of experiments and failure mode and effects analysis (FMEA) in an overall framework.
- ❑ PDCA-plan, do, check, act cycle for quality control purposes. (Six Sigma's DMAIC method (define, measure, analyze, improve, control) may be viewed as a particular implementation of this.)

- ❑ Quality circle-a group (people oriented) approach to improvement.
- ❑ Taguchi methods statistical oriented methods including quality robustness, quality loss function, and target specifications.
- ❑ The Toyota Production System reworked in the west into lean manufacturing.
- ❑ Kansei Engineering an approach that focuses on capturing customer emotional feedback about products to drive improvement.

❑ TQM-total quality management is a management strategy aimed at embedding awareness of quality in all organizational processes. First promoted in Japan with the Deming prize which was adopted and adapted in USA as the Malcolm Baldrige National Quality Award and in Europe as the European Foundation for Quality Management award (each with their own variations).

❑ TRIZ meaning "theory of inventive problem solving"

❑ BPR business process reengineering, a management approach aiming at optimizing the workflows and processes within an organisation.

❑ Top Down & Bottom Up Approaches-Leadership approaches to change.

# Fish-Bone

A fish-bone diagram is one of the seven quality circles (QC) tools. It helps to visualize the potential causes in order to find the root cause of a particular problem. It helps to identify, analyze and improve quality issues. Sometimes, it can also be helpful to analyze what can go wrong - preventing future problems. It derives its name for its shape which resembles the side view of the skeleton of a fish.





# 8D

8D is a problem-solving methodology for product and process improvement.

DO: Plan

D1: Use a team

D2: Define and describe the problem

D3: Develop interim containment plan; implement and verify interim actions  
D4: Determine, identify, and verify root causes and escape points

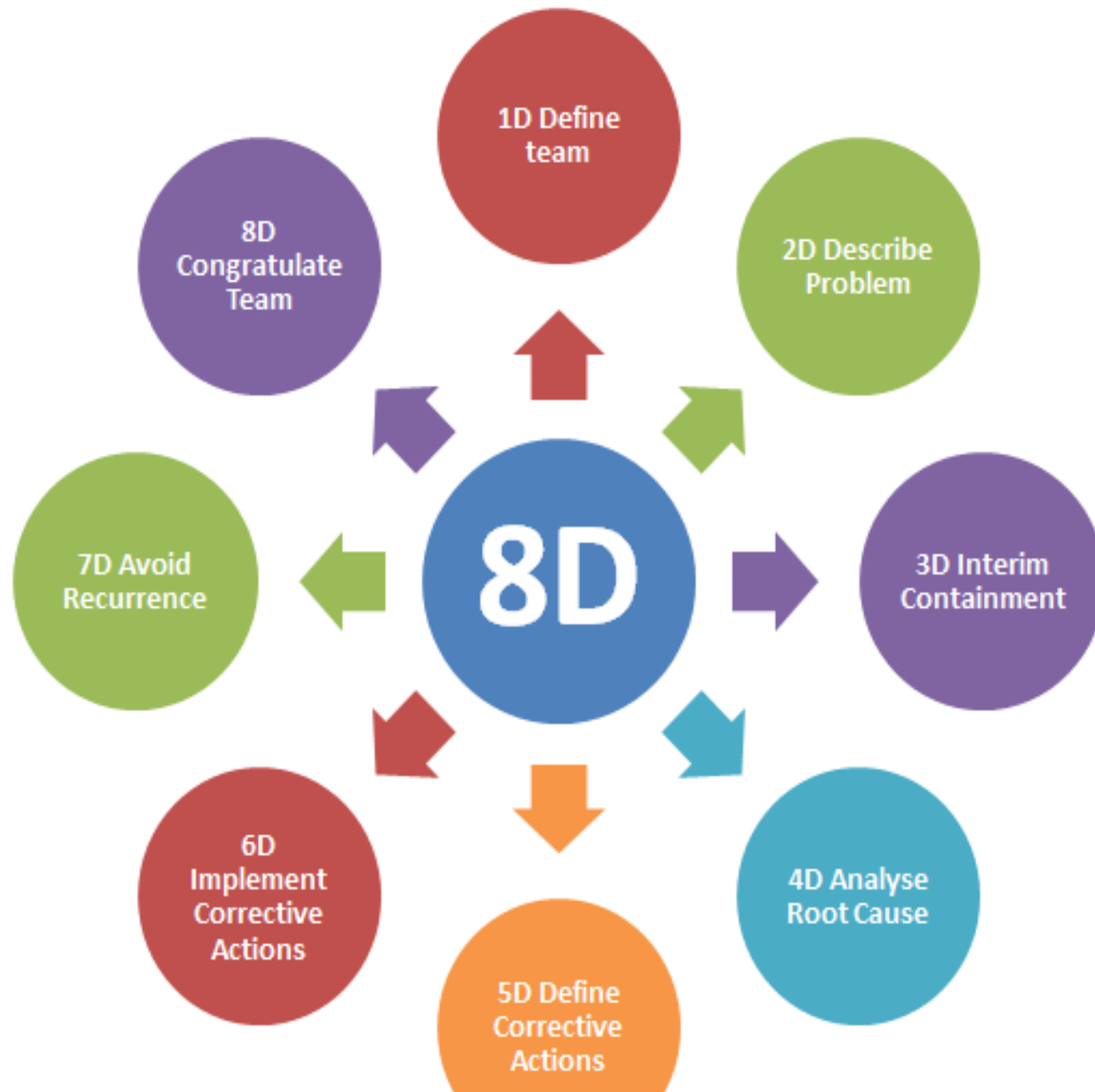
D5: Choose and verify permanent corrections (PCs) for problem/nonconformity

D6: Implement and validate corrective actions

D7: Take preventive measures

D8: Congratulate your team

# 8D METHODOLOGY



# 5S

The 5S Method is a standardized process that when properly implemented creates and maintains an organized, safe, clean and efficient workplace.

The 5S list is as follows:

1. Seiri / Sort: Separating of the essential from the nonessential items.
2. Seiton/Straighten: Organizing the essential materials where everything has its place.
3. Seiso/Shine: Cleaning the work area.
4. Seiketsu/Standardize: Establishing a system to maintain and make 5S a habit.
5. Shitsuke / Sustain: Establishing a safe and sanitary work environment (Safety).

**SORT**

SEIRI

SHISUKE

**SUSTAIN**

SHISUKE

SEITON

**STRAIGHTEN**

SEITON

**5S**

改善

SEIKETSU

**STANDARDIZE**

SEIKETSU

SEISO

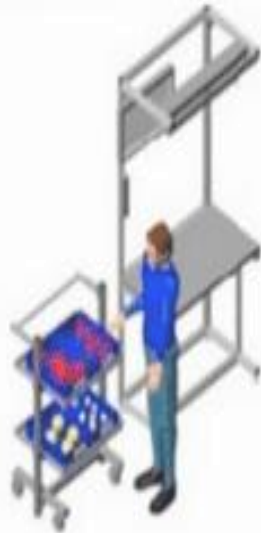
**SHINE**

# 5S

## 1. SEIRI Sort



## 2. SEITON Set in order



## 3. SEISO Shine



## 4. SEIKETSU Standardize



## 5. SHITSUKE Sustain



# ISO standards

The International Organization for Standardization (ISO) created the Quality Management System (QMS) standards in 1987. They were the ISO 9000:1987 series of standards comprising ISO 9001:1987, ISO 9002:1987 and ISO 9003:1987; which were applicable in different types of industries, based on the type of activity or process: designing, production or service delivery.





International  
Organization for  
Standardization

# Quality Management Software

Quality Management Software is category of technologies used by organizations to manage the delivery of high quality products. Solutions range in functionality, however, with the use of automation capabilities they typically have components for managing internal and external risk, compliance, and the quality of processes and products. Pre- configured and industry-specific solutions are available and generally require integration with existing IT architecture applications such as ERP, SCM, CRM, and PLM.

# Quality Management Software Functionalities

- Non-Conformances/Corrective and Preventive Action

- Compliance/Audit Management

- Supplier Quality Management

- Risk Management Statistical Process Control Failure Mode and Effects Analysis

- Complaint Handling Advanced Product Quality Planning

- Hazard Analysis & Critical Control Points

- Production Part Approval Process Enterprise

Quality Management Software -The intersection of technology and quality.



**THANK YOU**