

Process Improvement

QUALITY MANAGEMENT_2

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Agenda

- TQM - Continuous improvement
- Quality Management Systems
- ISO 9001 + Standards
 - Origin, Principles



Goal

TQM

Principles

**Customer
focus**

**Process
improvement**

Total involvement

Leadership

**Supportive
structure**

Communication

**Education and
training**

**Reward and
recognitions**

Measurement

**Supporting
elements**

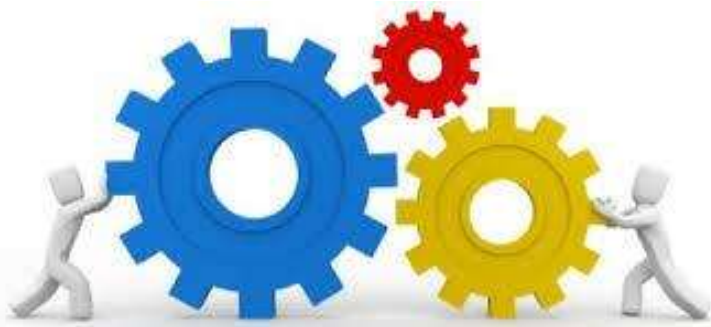
2. Continuous Improvement

The desired result is achieved more effectively when related resources and activities are managed as a PROCESS

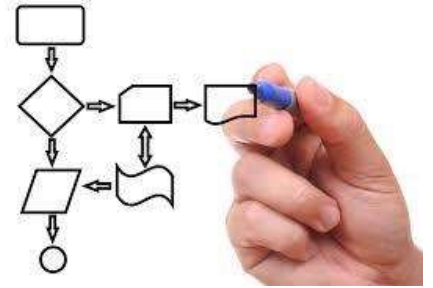
Continuous improvement is a permanent objective of the organization

In the race for quality, there is no finish line

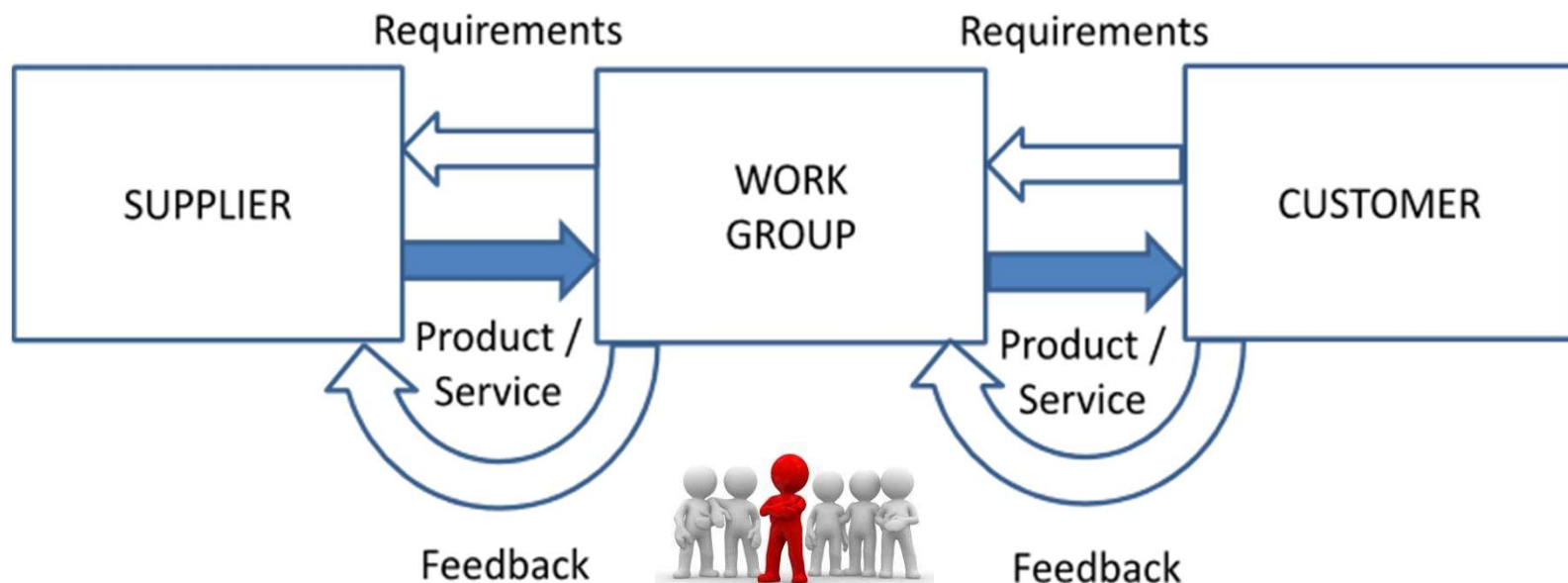




Process



A process is a sequential integration of people, materials, methods and machines in an environment to produce value-added outputs for customers.



Participants

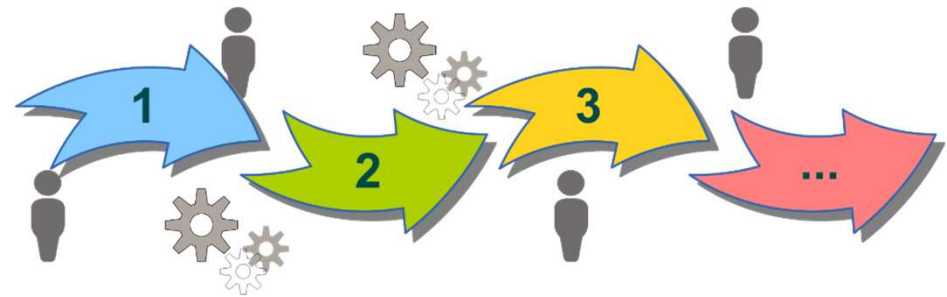
Four groups of people are involved in the operation and improvement of processes:

1. **Customers:** the people to whom the output (product or service) is made
2. **Workgroup:** the people who work in the process to produce and deliver the desired output
3. **Supplier:** the people who provide input for the work process.
4. **Owner:** the person who is responsible for the operation of the process AND its improvement



Classification of processes

- Management processes
- Main processes
- Supporting processes (IT, HR, QC)



- Key (important) processes - affect the success

Aims of process improvement

1. to create **reliable processes** in the sense that in each case we get the desired without any difference
2. the second step is to **redesign** the process to create an output that can **(better outcome)**

Quality Management System

The QMS is composed of all organization's policies, procedures, plans, resources, processes and determination of responsibility and authority, all aimed at achieving product or service quality levels consistent with **customer** specification and the organization's objectives.

When these policies, procedures, plans and so forth are taken together, they define how the organization works and **how quality is managed.**

Quality Management System

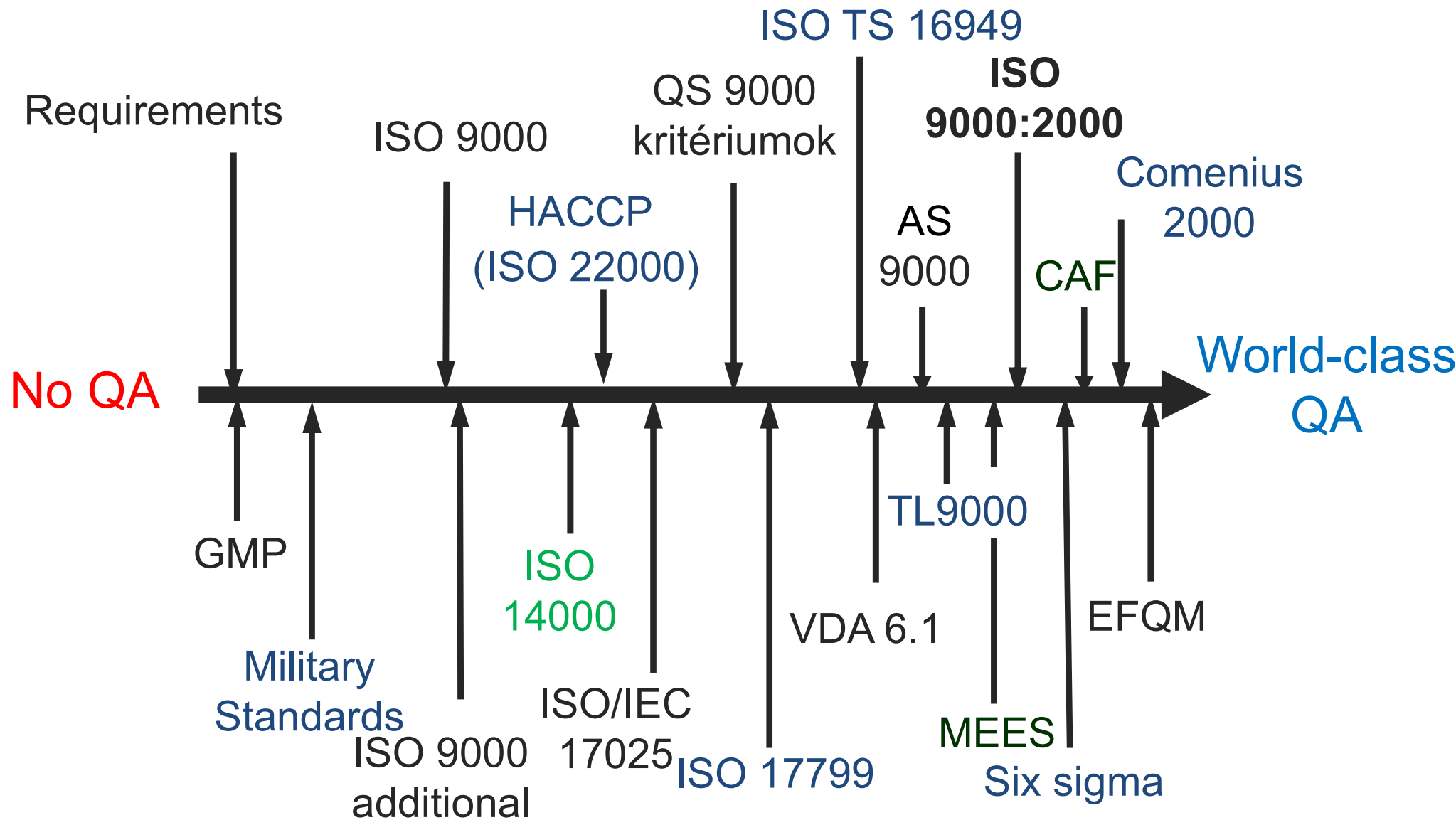
- provides a basis for documenting processes that are used to control and improve operations, and achieve:
 - ✓ higher product conformity and less variation;
 - ✓ fewer defects, waste, rework, and human error;
 - ✓ improved productivity, efficiency, and effectiveness;
 - ✓ drive innovation.

Main features of QA Systems



- Regulating the production system
Provides a stable, reliable and reproducible product to meet customer needs
- Not a product, but a system standard
- The standard sets out general requirements.
The organization develops its unique system.
- Certification

QMS evolution



[ISO.ORG](https://www.iso.org)

ISO 9000



- The best known QMS
– accepted worldwide
- isos = equal
- International Organization for Standardization 1987, 1994, 2000, 2008, 2015 – interpretation
- Technical specifications and criteria to be used as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes, and services are **fit for their purpose**.

ISO 9000



- designed as a **minimum** quality standard
- **Does not:**
 - ✓ specify **HOW** the requirements are to be implemented
 - ✓ replace the product, safety, regulatory requirements or standards
- Highest quality = technical product specifications + management system standards (ISO provides only the last one)

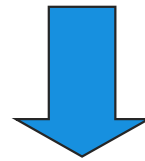
The ISO 9000 family of standards

- **ISO 9000:2015 – Fundamentals and vocabulary**
 - ✓ background information, the definition of key terms
- **ISO 9001:2015 – Requirements**
 - ✓ structure for a basic QMS, demonstrate compliance
- **ISO 9004:2018 – Guidance to achieve sustained success**
 - ✓ guidelines to assist organizations in improving and sustaining their QMS

Where is 9002, 9003?

ISO 9001 logic

The standard specifies the issues to be regulated



auditor

Define and document rules for our own operation



auditor

Let us apply our own rules

Auditing

- Systematic checking method, how the company can meet the standard
- Types:
 - 1st party – internal audit
 - 2nd party – supplier, customer audit
 - 3rd party – independent, external audit
 - Third party certification (and audits) in every 3 years – competitive advantage



Documentation requirements

Level 1: defines how the QMS operates

Everyone should be able to work from valid documents, all the time

Quality
MANUAL

Level 2: defines who, what, when

Quality
PROCEDURES

Level 3: answers how

Job INSTRUCTIONS

Level 4: shows that the system is operating

Quality records, reports, forms

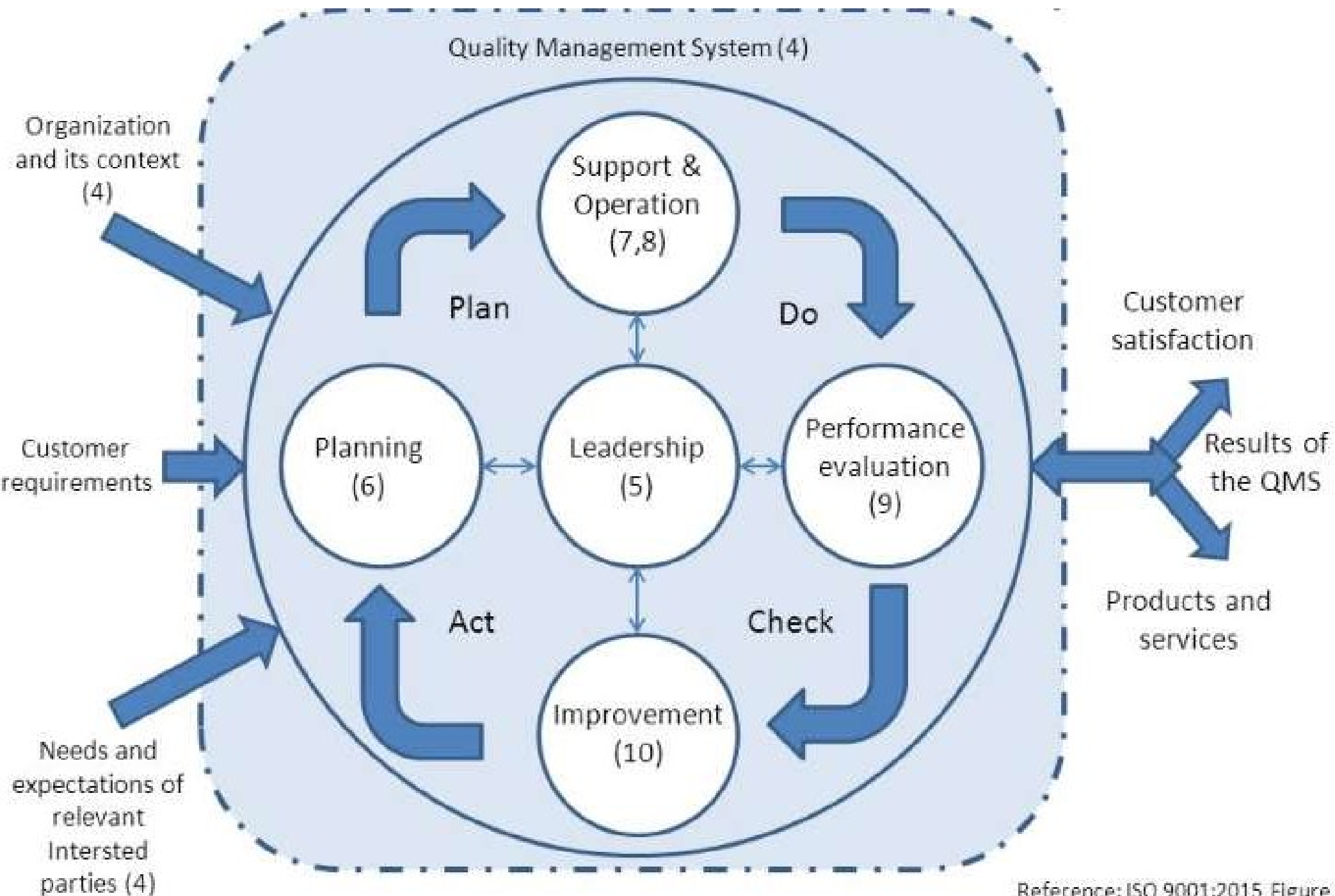
ISO 9001 principles

1. Customer focus
2. Leadership
3. Process approach
4. Improvement
5. Involvement of Employees
6. Evidence-based decision making
7. Relationship management

TQM has almost the same principles? What is the difference?

ISO 9001 clauses

- 0. Introduction
- 1. Scope
- 2. Normative reference
- 3. Terms and definitions
- 4. Context of the organisation
- 5. Leadership
- 6. Planning
- 7. Support
- 8. Operation
- 9. Performance evaluation
- 10. Improvement



Reference: ISO 9001:2015 Figure 2

Thank you for your attention

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