

**Course 10: ISO 9000 Quality Management System -QMS**  
**ISO 9000: Foundations of Quality Management and  
Organizational Excellence**  
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# Introduction to Quality Standards

- Quality has evolved from simple inspection to full strategic quality management.  
**ISO** (International Organization for Standardization) developed standards to unify and improve global quality practices.
- The **ISO 9000 series** is the most widely adopted quality management framework in the world.

## What is ISO 9000?

- ISO 9000 refers to a **family of quality management standards** that guide organizations to ensure products and services consistently meet customer expectations and regulatory requirements.

## Purpose

- Provide a **common language** for quality management.
- Establish **fundamental principles** of quality systems.
- Serve as the foundation for **ISO 9001 certification**.
- ISO 9000 is *not* a certification standard—ISO 9001 is.

## ISO 9000

- **Purpose:** Defines the fundamental concepts, principles, and vocabulary for quality management systems.
- **Role:** It is the foundation for the other standards, including ISO 9001, providing the language and principles.
- **Certification:** **It is not a certification standard**; you cannot be certified to ISO 9000 itself.

## ISO 9001 (the only certification)

- **Purpose:** Specifies the requirements for an organization's quality management system to demonstrate its ability to provide products and services that meet customer and regulatory requirements.
- **Role:** It outlines the "what" an organization must do to achieve quality management.
- **Certification:** This is the standard against which an organization **can get certified** to show its commitment to quality and customer satisfaction.

## ISO 9004

- **Purpose:** Provides guidance for organizations to achieve "sustained success" through continuous improvement of their quality management system.
- **Role:** It goes beyond the minimum requirements of ISO 9001 to help organizations improve overall performance and efficiency.
- **Certification:** **It is a guidance document, not a certification standard.**

## ISO 19011

- **Purpose:** Provides guidelines for auditing management systems, including both quality (ISO 9001) and environmental management systems.
- **Role:** It outlines the principles of auditing, how to manage an audit program, and how to conduct audits.
- **Certification:** It is a guideline for the *auditors* who verify compliance with standards like ISO 9001; **it is not a standard for organizational certification.**

# Core Concepts of ISO 9000

## a. Quality Management System (QMS)

- A set of processes ensuring consistency, customer satisfaction, and continuous improvement.

## b. Process Approach

- Organizations should manage activities as **interrelated processes** working toward a common goal.

## c. PDCA Cycle (Deming Cycle)

- Plan
  - Do
  - Check
  - Act
- Framework for continual improvement.

# The 7 Quality Management Principles (QMPs)

- **Customer Focus**  
Goal: understand and meet customer needs, enhance satisfaction.
- **Leadership**  
Leaders establish a unified direction and create a positive quality culture.
- **Engagement of People**  
Employees at all levels must be competent, empowered, and engaged.
- **Process Approach**  
Managing activities as processes creates efficiency and consistency.
- **Improvement**  
Continuous improvement is essential for maintaining performance.
- **Evidence-Based Decision Making**  
Decisions based on data lead to better outcomes.
- **Relationship Management**  
Managing relationships with suppliers and stakeholders enhances performance.

# ISO 9001 – Requirements Overview

- **Structure (High-Level Structure – Annex SL)**
- **Context of the Organization**
- **Leadership**
- **Planning**
- **Support**
- **Operation**
- **Performance Evaluation**
- **Improvement**

## **Examples of Requirements**

- Identifying risks and opportunities
- Documented information
- Control of nonconforming products
- Monitoring & measuring processes
- Customer feedback processes
- Internal audits & management review

- **9. Benefits of ISO 9001 Certification**
- **Strategic Benefits**
- Improved competitiveness
- Enhanced reputation & international recognition
- Better alignment of internal processes
- **Operational Benefits**
- Reduced defects and waste
- More consistent quality
- Improved customer satisfaction
- **Managerial Benefits**
- Better leadership engagement
- Clear responsibilities and process ownership
- Data-driven decision making

# Challenges in Implementation

- **Resistance to Change**
- **Documentation overload** if poorly implemented
- **Cost of certification**
- **Training requirements**
- **Maintaining continuous improvement** (avoiding “fake certification” culture)

# Case Example (Short)

## Case: Automotive Supplier in Algeria

- A company working with European automakers must comply with ISO 9001 to stay in the supply chain.

## Results after implementation:

- Defect rate reduced by 35%
- Faster order processing
- Stronger customer trust
- New contracts with foreign partners

## Why would this company seek ISO 9001 certification?

- A company would seek ISO 9001 certification for several strategic, operational, and commercial reasons:
- **a. Improve Quality and Consistency**
- ISO 9001 helps ensure that products or services are delivered in a consistent manner, reducing errors and defects.
- **b. Increase Customer Satisfaction**
- Customers trust certified companies more because they know the organization follows international standards. Certification can strengthen customer relationships and improve reputation.
- **c. Market Access & Competitive Advantage**
- Many clients—especially in international markets, public tenders, or industrial supply chains—**require or prefer** ISO-certified suppliers.  
Certification can open new opportunities and make the company more competitive.
- **d. Improve Internal Efficiency**
- Implementing ISO helps standardize processes, eliminate unnecessary steps, and reduce waste.
- **e. Demonstrate Professionalism and Credibility**
- ISO certification signals reliability, seriousness, and professional management practices.
- **f. Meet Regulatory or Partner Requirements**
- Certain industries (automotive, electronics, construction, food, etc.) often make ISO 9001 a prerequisite for collaboration.

# Which processes must be documented?

ISO 9001 does not require the documentation of *every* process, but it requires documentation of processes that are critical to ensuring consistent quality.

- **Key processes that typically must be documented:**
- **a. Quality Management System Documentation**
- Quality Policy
- Quality Objectives
- Scope of the QMS
- Organizational roles and responsibilities
- **b. Core Operational Processes**
- Product/service design and development (if applicable)
- Purchasing and supplier evaluation
- Production or service delivery processes
- Control of nonconforming products
- Customer-related processes (orders, feedback, complaints)
- **c. Support Processes**
- Competence and training
- Communication and documentation control
- Maintenance and calibration of equipment
- Resource management
- **d. Monitoring and Evaluation Processes**
- Internal audits
- Management review
- Performance measurement
- Corrective and preventive actions
- **General Principle**
- Document only what is necessary to:
- Ensure process consistency
- Avoid errors
- Demonstrate conformity during audits

# What improvements could ISO bring?

- ISO 9001 can bring meaningful improvements at multiple levels of the organization.
- **a. Operational Improvements**
- Clear and stable processes
- Reduction of defects, waste, and rework
- Better process flow and efficiency
- Fewer errors caused by unclear instructions
- **b. Customer-Related Improvements**
- Higher customer satisfaction
- Faster response to complaints
- Improved product/service quality
- Stronger trust and brand image
- **c. Management Improvements**
- Better communication between departments
- Clearer roles and responsibilities
- More informed, data-based decisions
- More effective risk management
- **d. Cultural Improvements**
- Employees become more engaged and responsible
- Stronger quality culture
- Encouragement of continuous improvement (PDCA cycle)
- **e. Strategic Improvements**
- Access to new markets
- Increased competitiveness
- Stronger partnerships with suppliers and stakeholders

- **Conclusion**

- ISO 9000 provides the philosophy, vocabulary, and foundation of quality management.  
ISO 9001 operationalizes it through structured, measurable requirements that help organizations deliver consistent value.
- Understanding ISO is essential for future managers who will design, improve, or audit organizational processes.