

What is a Quality Management System?

A **Quality Management System (QMS)** is a structured framework of processes, procedures, and responsibilities that ensures products and services consistently meet customer and regulatory requirements. At its core, a QMS is about delivering quality outcomes—keeping both your organisation and your customers in mind.

Key benefits include:

- Meeting customer requirements
- Complying with regulations
- Increasing customer satisfaction
- Reducing costs through efficiency
- Strengthening competitiveness

A Brief History of Quality Management

Even before the concept of a formal QMS existed, quality control was practiced in more basic forms.

In **medieval times**, trade guilds—associations of craftsmen and merchants—trained members and inspected goods to maintain standards. Poor workmanship could result in fines or expulsion. This system worked when one person was responsible for the product, but fell short when production involved multiple people or causes beyond human error.

Early quality control focused on the **final product**. Faulty items were simply discarded or repaired. While this helped avoid customer complaints, it was costly and inefficient. Quality, time, and cost were often seen as trade-offs—you couldn't have all three.

Quality During Wartime

During **World War II**, the need for reliable, mass-produced military equipment highlighted the importance of quality control. Faulty gear wasn't just a waste—it endangered lives and missions. This led to the development of **military sampling standards**, where random samples from each production lot were inspected. Lots were accepted only if the number of defects was below a defined limit.

From Quality Control to Quality Assurance

In the **1960s**, the focus shifted from detecting defects to **preventing them**—a concept known as **quality assurance**. Instead of relying solely on inspections, organisations began identifying

potential sources of error in advance. This approach laid the groundwork for more proactive, process-based quality management.

The Systems Approach to Quality

Modern quality assurance takes a **systems approach**, focusing on how processes interact rather than looking at product quality in isolation.

Take a coffee shop, for example:

From sourcing ingredients to taking orders, processing payments, making coffee, and serving the customer—each step affects the final outcome. If the coffee is great but the service is slow, or if the payment process is smooth but the ingredients are poor, the customer experience still suffers. Quality must be built into every step of the process.

This shift—from product-focused to process-focused—led to tools like:

- **The Seven Tools of Quality Management** (e.g., control charts, Pareto analysis)
- **The PDCA Cycle** (Plan–Do–Check–Act), which evolved from the Shewhart Cycle

The Rise of Formal Quality Standards

As quality practices matured, the need for a universal framework led to the creation of **Total Quality Management (TQM)** and the **ISO 9000 series**.

ISO 9000 is an internationally recognised family of standards that define quality management systems. The most well-known standard, **ISO 9001**, outlines the requirements for a QMS and is built around seven guiding principles:

- Customer focus
- Leadership
- Engagement of people
- Process approach
- Improvement
- Evidence-based decision making
- Relationship management

These principles provide a consistent foundation for managing quality across any industry.

Total Quality Management (TQM)

Developed in the 1980s by **W. Edwards Deming**, TQM promotes continuous improvement across all levels of an organisation. It emphasises:

- Involvement of **all employees**

- Focus on **customer satisfaction**
- Consideration of **employee wellbeing**, not just machine efficiency

TQM has had a major impact in people-focused sectors like **education, hospitality, and healthcare**, where engagement and service quality are key.

Lean, Six Sigma, and Beyond

In the late 20th century, more targeted quality improvement methods emerged:

- **Lean Manufacturing** focuses on eliminating waste, improving flow, and delivering value efficiently. It's widely used in industries like automotive (e.g., Toyota) and retail (e.g., Starbucks). While powerful, it requires a culture of precision and continuous improvement.
- **Six Sigma** is a data-driven method for reducing defects and variability. It uses statistical tools to improve process consistency and has seen success in sectors like manufacturing, finance, and healthcare. Although resource-intensive, its structured methodology helps organisations achieve high reliability.

Together, **Lean** and **Six Sigma** have shaped how organisations think about quality—shifting the focus from inspection to **prevention**, from outputs to **processes**, and from isolated efforts to **system-wide improvement**.