

# Total Quality Management

## Basic Concepts and Systems

Total Quality Management (TQM) has been a buzzword that has been heard around many work areas since the late 1970's (in the United States). The following is a simple outline of the key components that makes up TQM. It is useful to have a broad understanding of these components so that misinterpretations of concepts and definitions do not occur.

TQM is primarily "**Customer-Focused Management**". Various names have been used over time to describe it, (1) since development of the concepts occurred in fragments, then later, they were consolidated, and (2) business tends to move towards strategies that are "in"; if an old name isn't regarded as being "in", then it is renamed, polished and represented in a different form.

Customer-Focused Management  
Quality-Driven Management  
Fourth-Generation Management  
CQI: Continuous Quality Improvement  
TQM: Total Quality Management  
TQC: Total Quality Control  
CWQC: Company-Wide Quality Control  
CWTQC: Company-Wide Total Quality Control  
GWTQC: Group-Wide Total Quality Control  
ISO-9000: International Standards Organization  
People-Centered Management System  
6σ: Six-Sigma

## ***Fundamental Guiding Principles***

The following eight principles serve as the pillars to a customer-focused management system.

### **1. Process Management**

Activities are managed as processes that add value to customers.

A structure must be in place to support the flows.

### **2. Customer Focus**

The purpose of what we do is to add value to customers.

**Quality:** The goodness of our results as perceived by our customers.

**Customer:** Anyone impacted by our results

**Quality Element:** An element of our results that indicates how well our results perform in satisfying a customer need.

**Quality Characteristic:** A measurable quality element.

**Pull Model:** What does the customer want (needs) from us versus what we think the customer needs (Push model).

- **Sensory** Engineering: feel/touch, sound, smell, taste, sight
- **Kansei** Engineering: making things feel good (emotions and feelings)

### 3. Continuous Improvement

We continually improve what we do to increase value to customers.

There is no such thing as optimal; it can be improved infinitely.

If everything can be improved, the key is **prioritization**.

#### Types of Improvement

- Stability (eliminate defects)
- Incremental (evolution)
- Breakthrough (jump start)

### 4. Total Employee Involvement & Empowerment (the inclusive principle)

All people are involved in improvement; all areas of performance are included.

Everyone pays attention to how we can add value to others (their customers).

**Participation** is behavioral - doing; going through the motions. *This is what is needed first to achieve change. The bottom 2 sub-components cannot be achieved, without first achieving this sub-component. In every successful implementation effort that has taken place, upper management has had to initiate change that no one wanted (at Motorola, at 3M, at GE, at Florida Power & Light).*

**Involvement** is what is in the heart and head; it drives participation; what people feel they are doing.

**Empowered** employees are able to manage and improve his/her own processes while continuously improving. To be empowered, an employee must be

provided with the adequate information, training, tools, techniques, responsibility, and support to process - training and education are key to empowerment. *This sub-component deals with ownership (what am I in charge of) and capability (being able to do it).*

## 5. Cooperation, Teamwork, and a Systems Approach

Cooperate and align to create synergy. No group or person can operate effectively as an island.

Diversity is a key component to enhancing individual and group learning, thereby, improving organization capacity.

Systems Approach: The whole cannot be optimized by optimizing the parts. Interactions are key.

## 6. Data-Based Decision Making

Decisions are guided by facts and data not gut feelings.

Planning is fundamental to organizing and prioritizing efforts as well as a guide to proper decision-making.

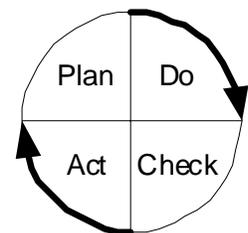
Understanding variation

Understanding own capability (what can we do) and stability (how stable are we).

## 7. Scientific Method / PDCA Learning Cycle

Use of the scientific method involves learning from what we do.

Feedback loops are key to continuous improvement.



## 8. Quality Chain Reaction

Concentrate on Quality because:

Increase Quality → Cut Costs → Increase Productivity →  
Lower Prices → Increase Market Share → Benefit the Organization