

# M Sc Statistics

Sem IV

Paper IV - Industrial Statistics

Unit I - Total Quality Management

•  
Dr Sandhya Dhabe •

Associate Professor, Dept of Statistics, •  
Institute of Science ,Nagpur •

# TQM

**Total**



**Made up of the whole**

**Quality**



**Degree of excellence a  
product or service  
provides**

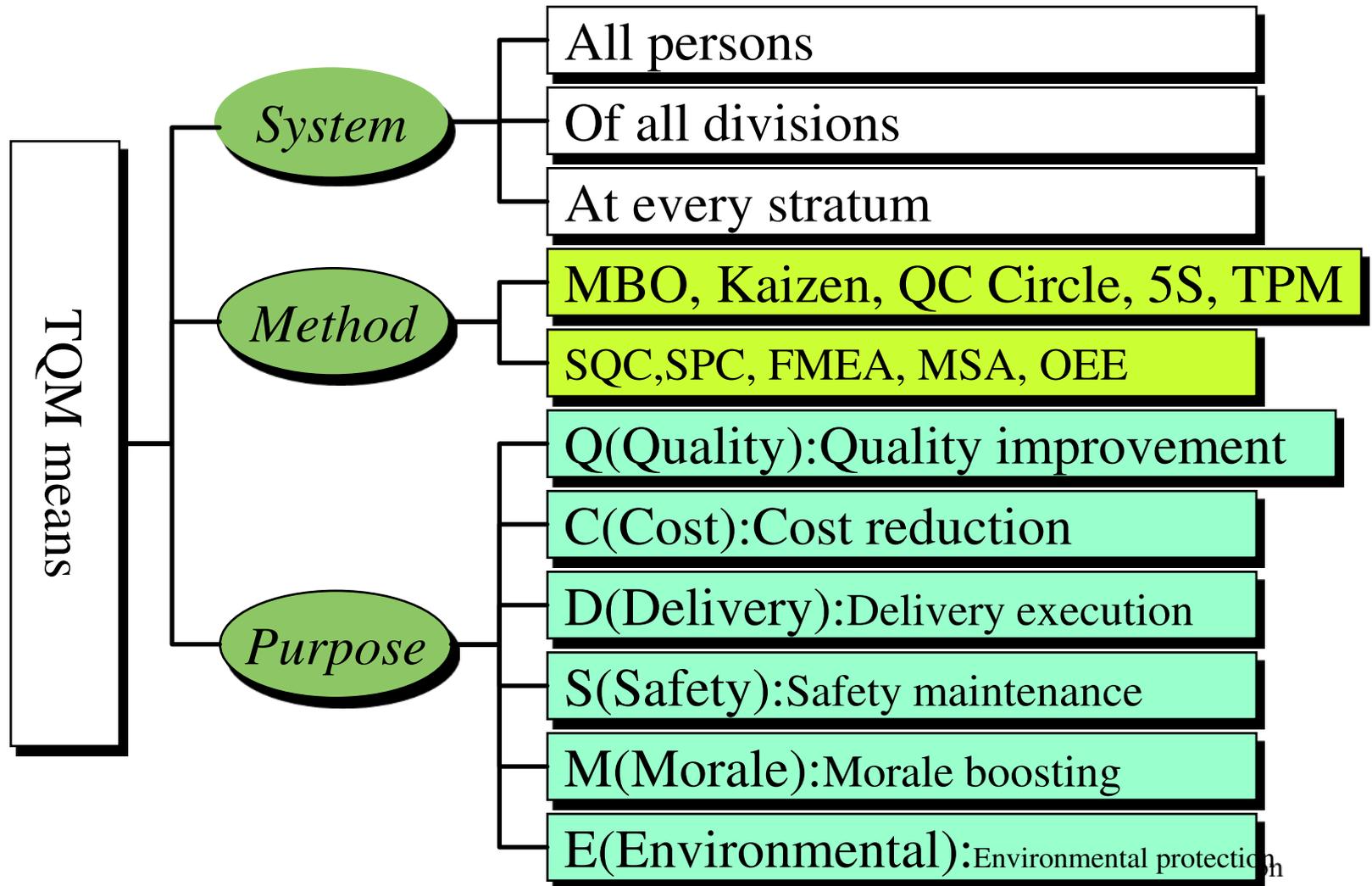
**Management**



**Art of Planning,  
Organizing,  
Controlling etc.**

**Therefore, TQM is the art of managing the whole to achieve excellence.**

# Meaning of TQM



# Definition of TQM

**Systematic activities of operating the whole units of a company effectively and efficiently to supply goods and services of quality satisfactory to customers at right time and at right price, thus contributing to attaining **Business Purposes.****

TQM is integrated organisational approach in delighting customers (both internal and external) by meeting their expectations on a continuous basis through everyone involved in the organisation, working on continuous improvement in all products, services, and processes along with proper problem solving methodology.

# Definition of TQM

"TQM is a management approach for an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society."

Total Quality Management (TQM) is a management strategy aimed at embedding awareness of quality in all organizational processes.

Total Quality Management means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques, and training. This involves the continuous improvement of organizational processes, resulting in high quality products and services.

# What's the goal of TQM?

*“Do the right things **right** the first time, every time.”*

# Pillars of TQM

1- Customer Focus: Studying customer needs, gathering customer requirements, and measuring and managing customer satisfaction.

Customer satisfaction is seen as the company's highest priority. The company believes that it will only be successful if its customers are satisfied.

2- Process Management: Develop a production process that reduce the product variations. Applying the same process; the same product should be produces with the same level of quality every time.

Teams are process-oriented, and interact with their internal customers to deliver the required results. Management's focus is on controlling the overall process, and rewarding teamwork.

# Pillars of TQM

3- Employee Empowerment (Human side of Quality): TQM environment requires a committed and well-trained work force that participates fully in quality improvement activities.

On-going education and training of all employees supports the drive for quality.

4- Continuous Improvement: TQM recognizes that product quality is the result of process quality. As a result, there is a focus on continuous improvement of the company's processes.

This will lead to an improvement in process quality. In turn this will lead to an improvement in product quality. Measurement and analysis is the tool that has been used for that.

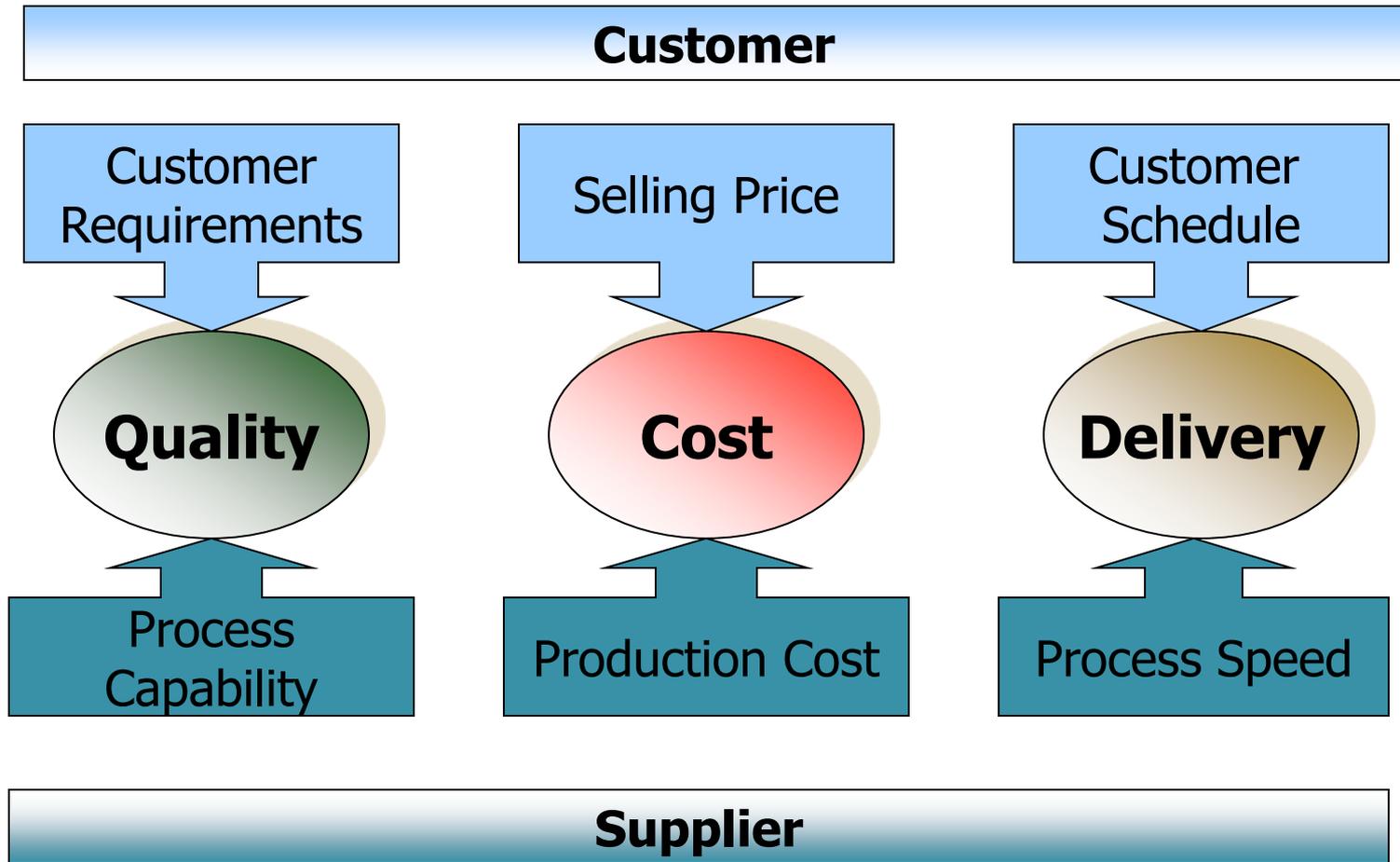
# Customer types

- **External and Internal** customers
- **External – current, prospective and lost customers**
- **Internal** – Every person in a process is a customer of the previous operation.( applies to design, manufacturing, sales, supplies etc.) [Each worker should see that the quality meets expectations of the next person in the supplier-to-customer chain ]
- **TQM** is commitment to **customer-focus** - internal and external customers.

# What is customer satisfaction?

- Is it due to Product quality?
- Is it due to pricing?
- Is it due to good customer service ?
- Is it due to company reputation?
- Is it something more?

# Integrated Quality



# Customer satisfaction/dissatisfaction feedback

- **Customer feedback has to be continuously sought and monitored - not one-time only! ( Pro-active! Complaints are a reactive method of finding out there is a problem)**
- **Customer feedback can be relayed to Mfgr.**
- **Performance comparison with competitors can be known**
- **Customers needs can be identified**
- **Relative priorities of quality can be obtained from the horses' mouth!**
- **Areas for improvement can be noted.**

# Customer feedback methods

- Comment cards enclosed with warranty card when product is purchased.
- Customer survey and questionnaire
- Customer visits
- Customer focus groups
- Quarterly reports
- Toll-free phones
- e-mail, Internet news groups, discussion forums
- Employee feedback
- Mass customization.

# Benefits of Quality

- 1. Higher customer satisfaction**
- 2. Reliable products/services**
- 3. Better efficiency of operations**
- 4. More productivity & profit**
- 5. Better morale of work force**
- 6. Less wastage costs**
- 7. Less Inspection costs**
- 8. Improved process**
- 9. More market share**
- 10. Spread of happiness & prosperity**
- 11. Better quality of life for all.**