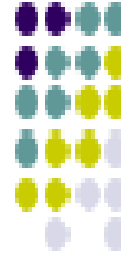


TQM Historical Perspectives and its Implementation

By

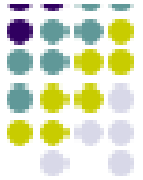
Dr. B.K.C.Ganesh, Faculty, SMCE, Guntur.

Total Quality Management



- The way of managing organization to achieve excellence
- Total

Definition of TQM (BS4778:1991)



A management philosophy embracing all activities through which the needs and expectations of the **CUSTOMER** and **COMMUNITY**, and the objectives of the organization are satisfied in the most efficient and cost effective manner by maximising the potential of ALL employees in a continuing drive for improvement.

Effect of Quality Improvement



Improve Quality (Product/Service)



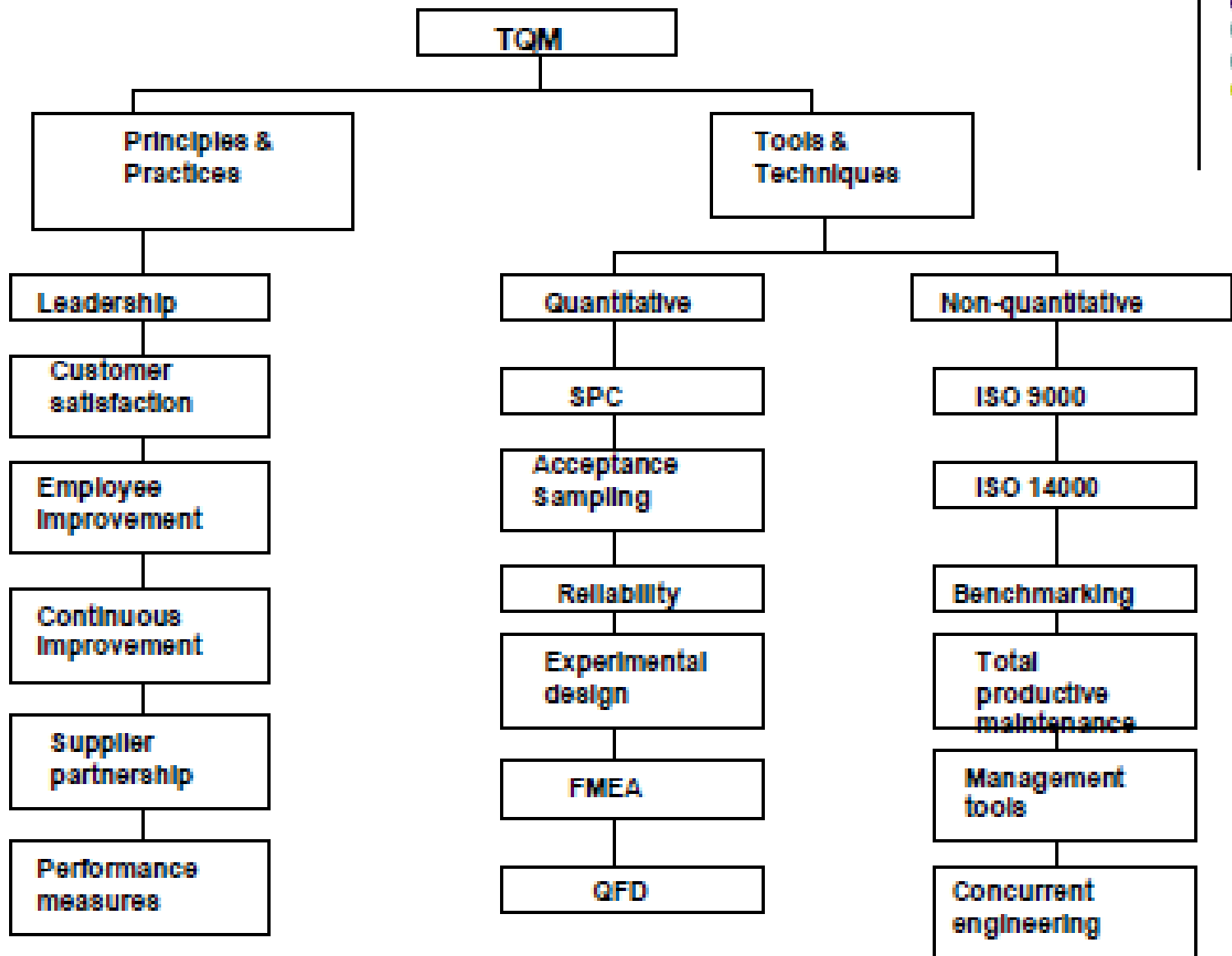
Increase Productivity (less rejects, faster job)



Lower Costs and Higher Profit



Business Growth, Competitive, Jobs, Investment



Scope of the TQM activity

TQM Six Basic Concepts

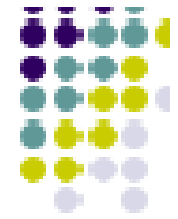


1. Leadership
2. Customer Satisfaction
3. Employee Involvement
4. Continuous Process Improvement
5. Supplier Partnership
6. Performance Measures

(All these present an excellent way to run a business)

Criteria 1

Leadership

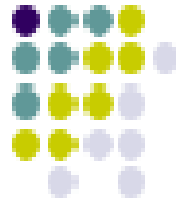


- Top management must realize importance of quality
- Quality is responsibility of everybody, but ultimate responsibility is CEO
- Involvement and commitment to CQI
- Quality excellence becomes part of business strategy
- Lead in the implementation process

Characteristics of Successful Leaders



1. Give attention to external and internal customers
2. Empower, not control subordinates. Provide resources, training, and work environment to help them do their jobs
3. Emphasize improvement rather than maintenance
4. Emphasize prevention
5. Encourage collaboration rather than competition
6. Train and coach, not direct and supervise
7. Learn from problems



Implementation Process

- Must begin from top management, most important CEO commitment
- Cannot be delegated (indifference, lack of involvement cited as principle reason for failure)
- Top/senior management must be educated on TQM philosophy and concepts, also visit successful companies, read books, articles, attend seminars
- Timing of implementation

Criteria 2

Customer Satisfaction

- Customer is always right

Issues for customer satisfaction



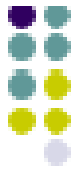
Checklist for both internal and external customers

1. Who are my customers?
2. What do they need?
3. What are their measures and expectations?
4. Does my product/service exceed their expectations?
5. How do I satisfy their needs?
6. What corrective action is necessary?

Customer Feedback

To focus on customer, an effective feedback program is necessary, objectives of program are to:

1. Discover customer dissatisfaction
2. Discover priorities of quality, price, delivery
3. Compare performance with competitors
4. Identify customer



Customer Feedback Tools/Method

- Warranty cards/Questionnaire
- Telephone/Mail Surveys
- Focus Groups
- Customer Complaints
- Customer Satisfaction Index

Good experience are told to 6 people while bad experience are repeated to 15 people

Criteria 3 Employee Involvement

People –most important resource/ asset

Quality comes from people

Deming –15% operator errors, 85%
management system

Project teams –Quality Control Circles
(QCC), QIT

Education and training –life long,
continuous both knowledge and skills

Suggestion schemes; Kaizen, 5S teams

Motivational programmes, incentive
schemes

Criteria 4 Continuous Process Improvement

- * View all work as process –production and business

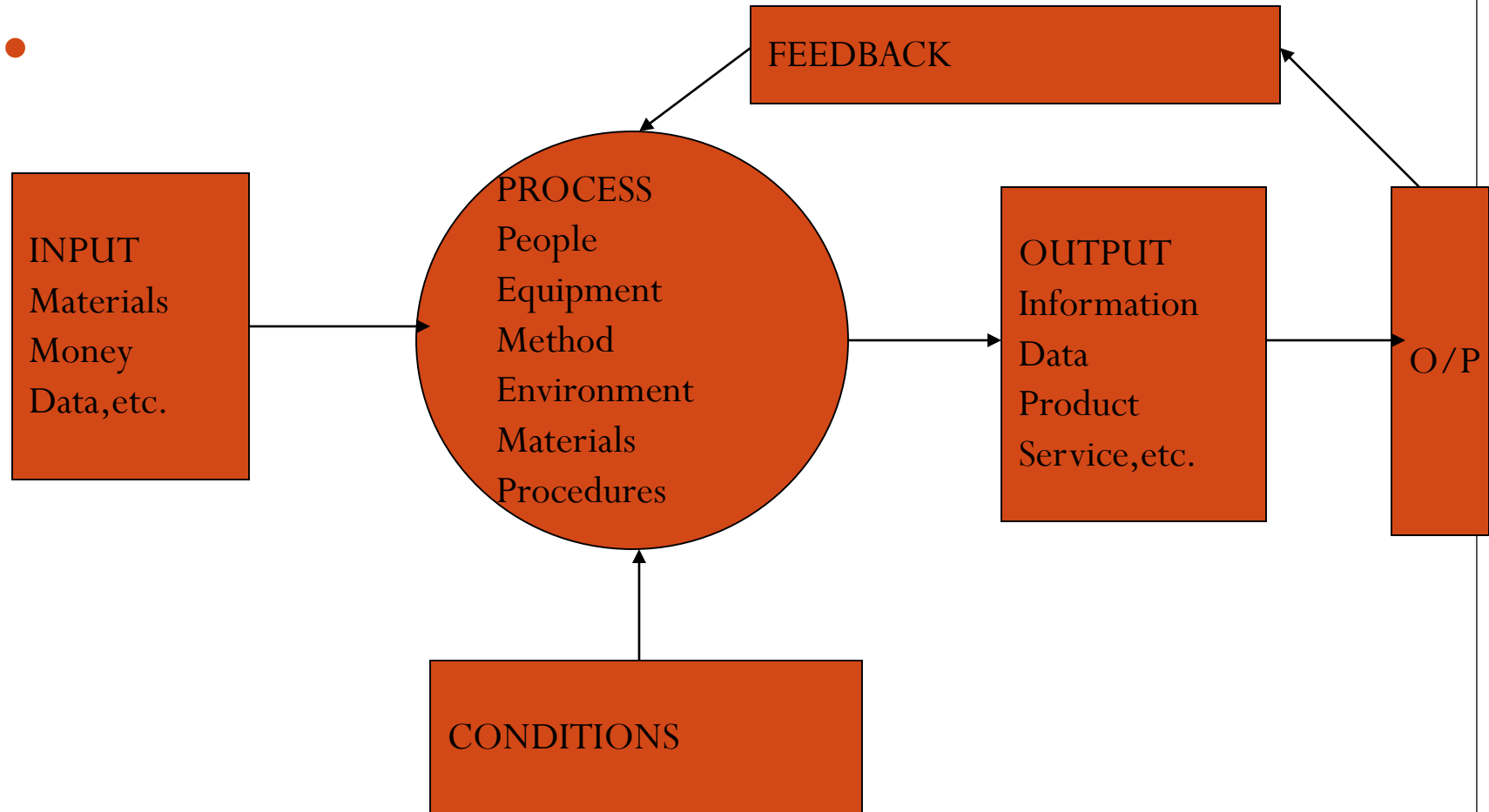
- * Process –purchasing, design, invoicing, etc.

- *Inputs –PROCESS –outputs

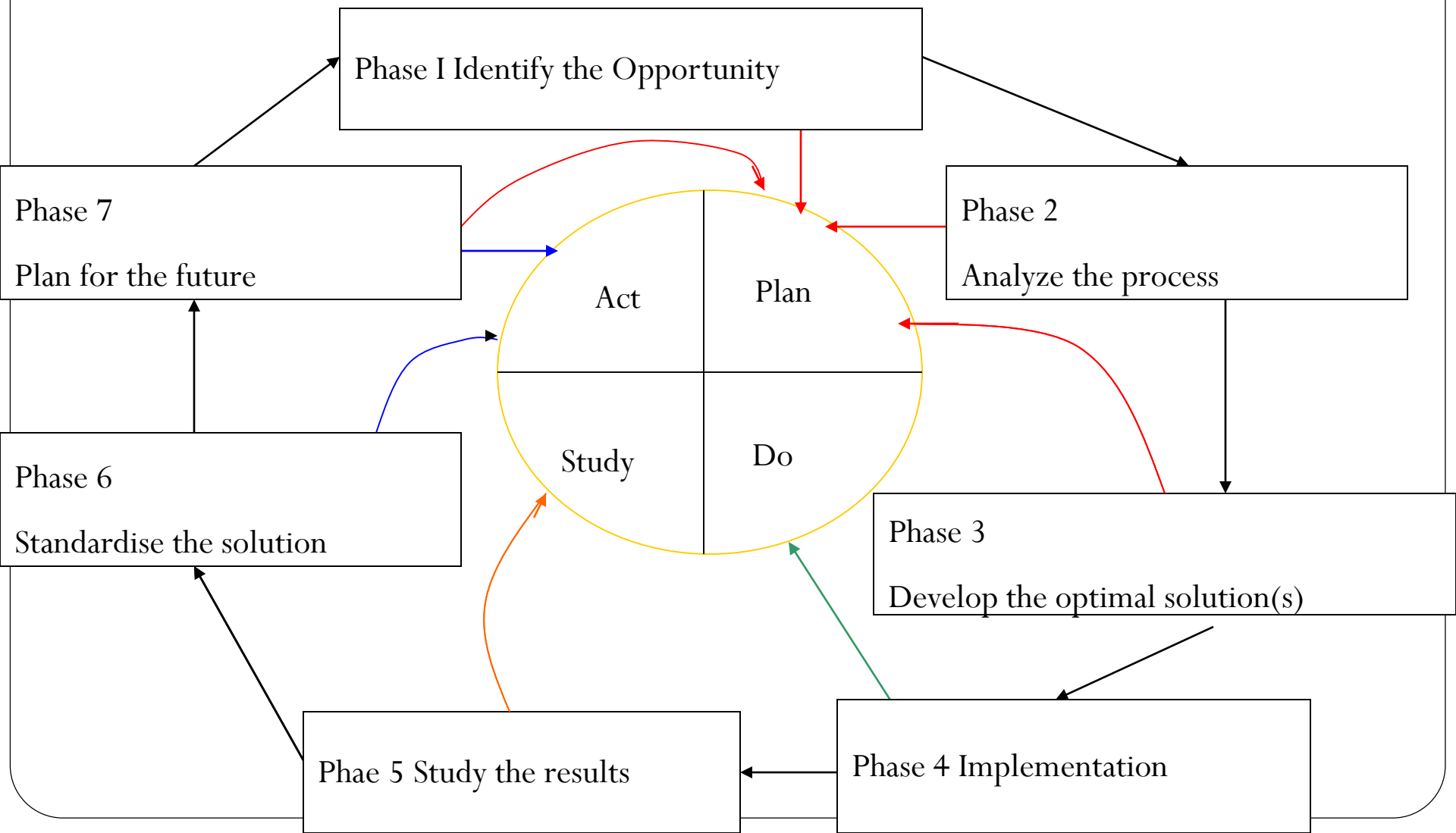
Process improvement –increased customer satisfaction

- * Improvement –5 ways; Reduce resources, Reduce errors, Meet expectations of downstream customers, Make process safer, make process more satisfying to the person doing

Continuous Process Improvement

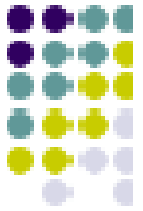


Continuous Process Improvement cycle



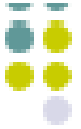
Criteria 5

Supplier Partnership



- Define product/program requirements;
 1. Evaluate potential and select the best suppliers
 2. Conduct joint quality planning and execution
 3. Require statistical evidence of quality
 4. Certify suppliers, e.g. ISO 900, Ford Q1
 5. Develop and apply Supplier Quality Ratings
 - Defects/Percent non-conforming
 - Price and Quality costs
 - Delivery and Service

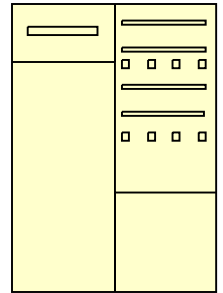
Supplier Partnership



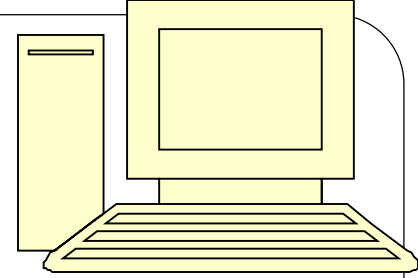
- 40% product cost comes from purchased materials, therefore Supplier Quality Management important
- Substantial portion quality problems from suppliers
- Need partnership to achieve quality improvement

TQM principles from the Japanese

- **The 3 K Method**
- **Kimerareta Kotoo** – What has been decided
- **Kimerareta Tori** – must be followed
- **Kichim to Mamorukoto** – as per standard.



The 5S Method



- **Seiko** - **Sort (Proper arrangement)**
- **Seiton** - **Set (Systematic or Orderliness)**
- **Seiso** - **Shine (Sweep or clean-up)**
- **Seiketso** - **Standard (Personal cleanliness)**
- **Shitsuke** - **Sustain (Self-discipline)**

Importance of TQM

Quality for Profit

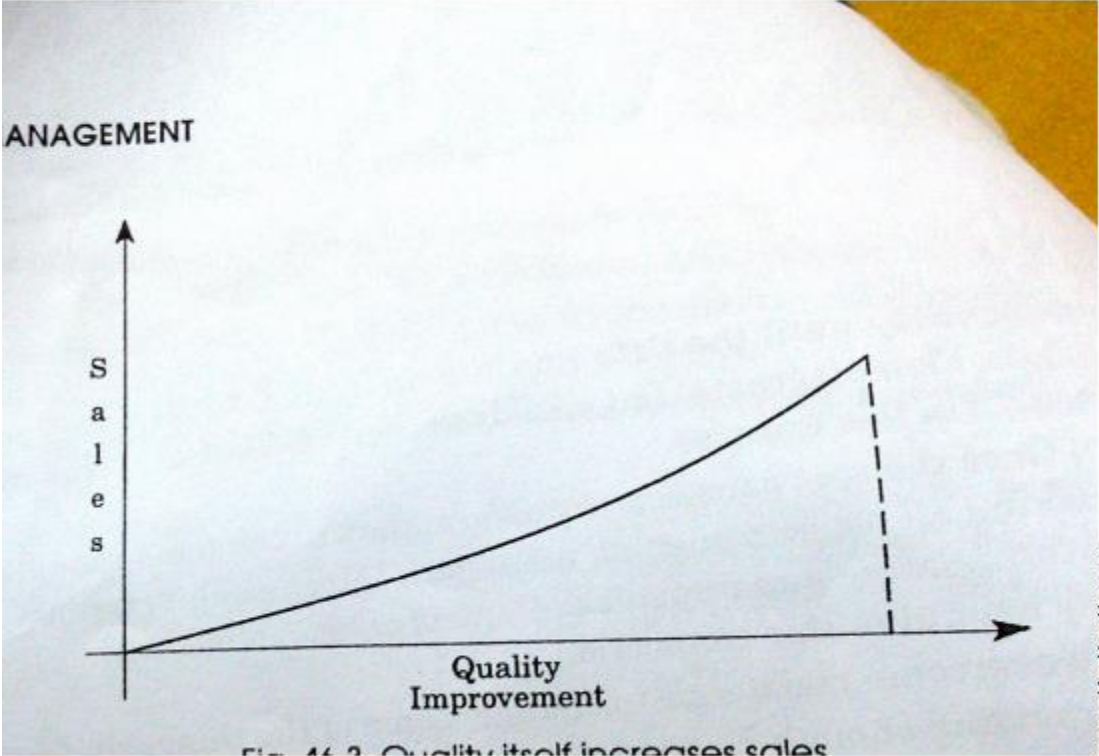
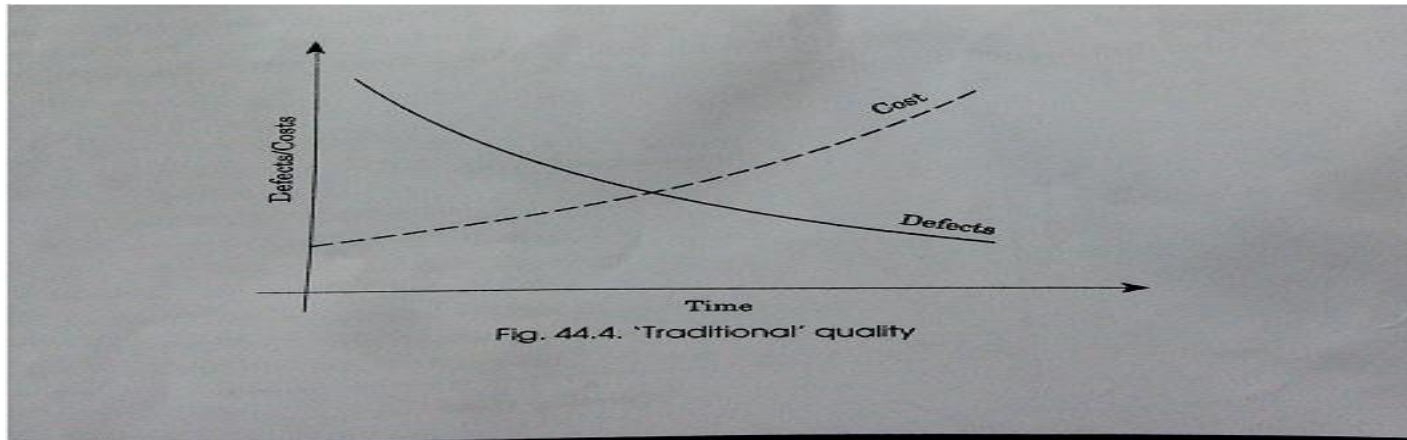
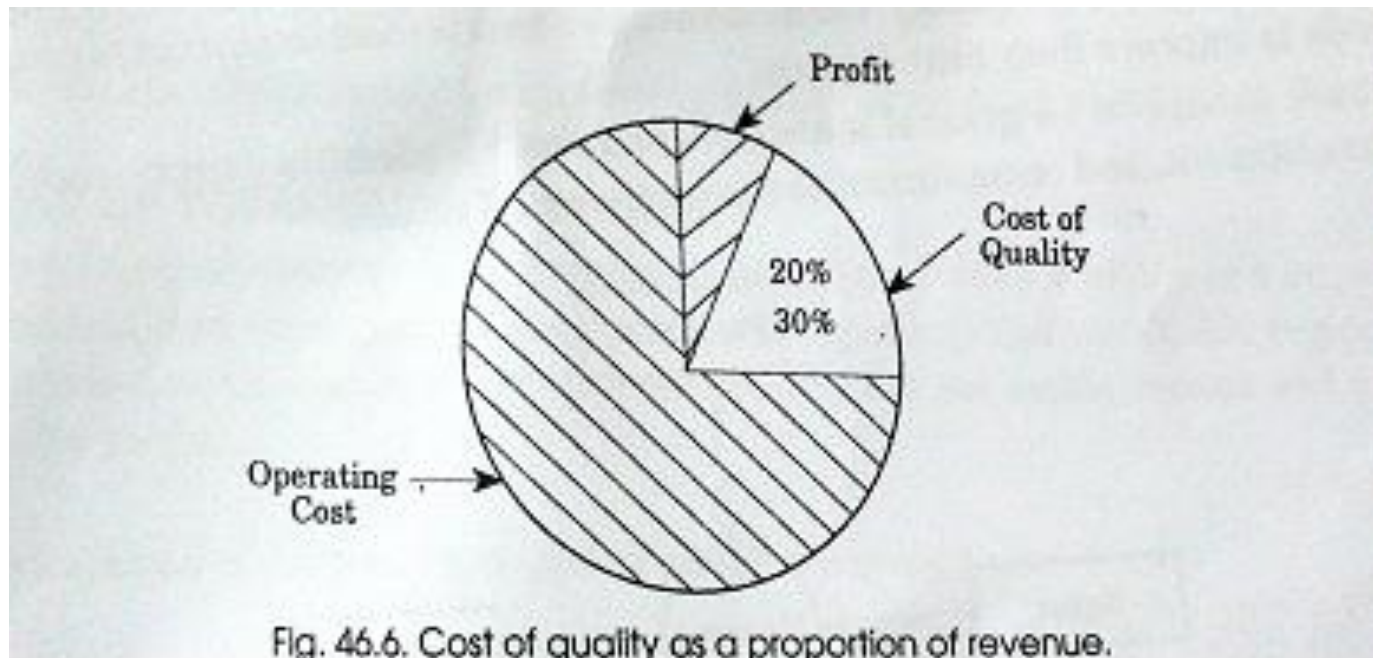


Fig. 14.3. Quality itself increases sales

Right First Time or Zero defect



Cost of Quality



Managers as Role Models

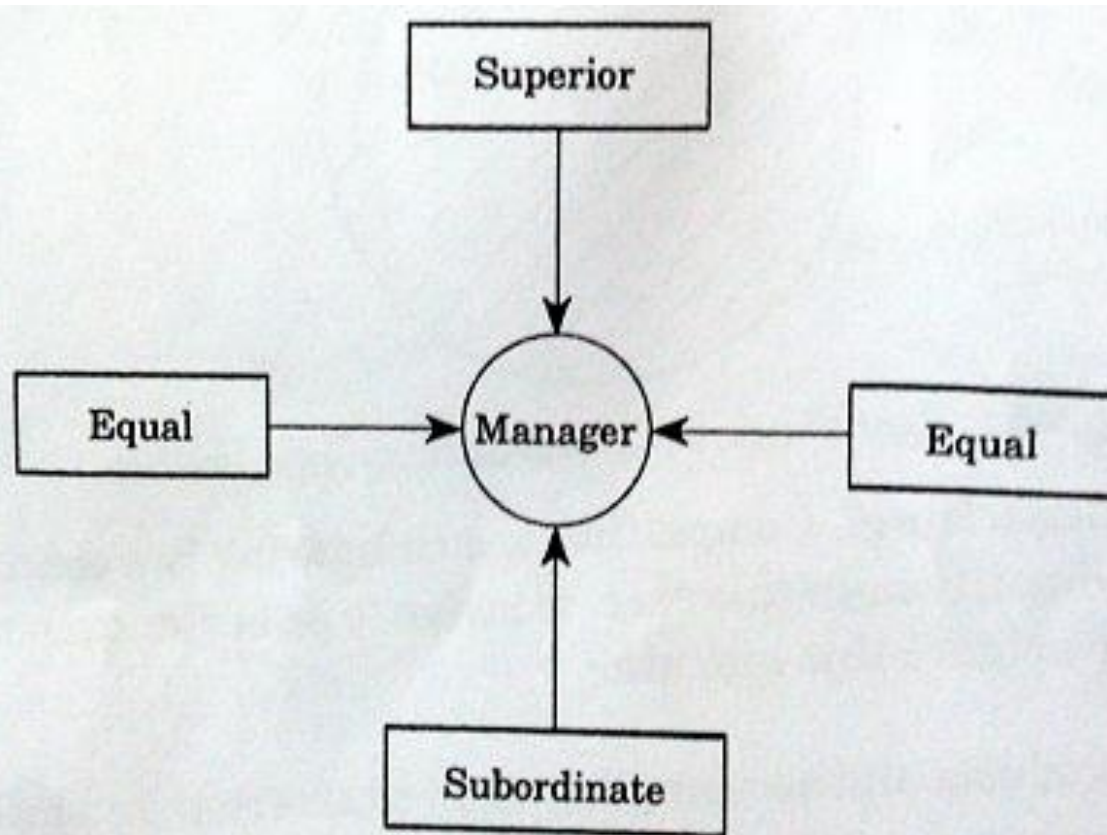


Fig. 46.7. Directions of managerial feedback.

Competitive Benchmarking

- Benchmarking the Products and services delivered to external and the internal customers
- Bench marking the business processes in all departments and functions
- Bench marking the organization, business culture and calibre of people.

Synergy(Harmony) in Team Work
Recognition and Rewards.

ISO Certification

ISO 9001 and ISO 14001 in brief

- ISO 9001 and ISO 14001 are among **ISO's most well known standards** ever.
- They are implemented by more than a million **organizations** in some **175 countries**.
- **ISO 9001** helps organizations to implement **quality management**.
- **ISO 14001** helps organizations to implement **environmental management**.

Quality management

- ISO 9001 is for **quality management**.
- **Quality** refers to all those features of a product (or service) which are required by the customer.
- **Quality management** means what the organization does to
- ensure that its products or services satisfy the customer's **quality requirements** and
- comply with any **regulations** applicable to those products or services.

Quality management (*cont.*)

- Quality management also means what the organization does to
- enhance **customer satisfaction**, and
- achieve **continual improvement** of its performance.

Environmental management

- ISO 14001 is for **environmental management**. This means what the organization does to:
- **minimize harmful effects** on the environment caused by its activities,
- to conform to applicable **regulatory requirements**, and to
- achieve continual improvement of its **environmental performance**.

Generic standards

ISO 9001 and ISO 14001 are **generic** standards.

Generic means that the same standards can be applied:

- to **any organization**, large or small, whatever its product or service,
- in **any sector** of activity, and
- whether it is a business enterprise, a public administration, or a government department.

Generic standards (*cont.*)

Generic also signifies that

- no matter what the organization's scope of activity
- if it wants to establish a **quality management system**, ISO 9001 gives the essential features
- or if it wants to establish an **environmental management system**, ISO 14001 gives the essential features.

Management systems

- **Management system** means what the organization does to manage its processes, or activities in order that
- its products or services meet **the organization's objectives**, such as
- satisfying the **customer's quality requirements**,
- complying to **regulations**, or
- meeting **environmental objectives**

Management systems

- To be really efficient and effective, the organization can manage its way of doing things by **systemizing** it.
- Nothing important is left out.
- **Everyone is clear about who is responsible** for doing what, when, how, why and where.
- Management system standards provide the organization with an international, state-of-the-art **model** to follow.

Management systems *(cont.)*

- Large organizations, or ones with complicated processes, could not function well without management systems.
- Companies in such fields as aerospace, automobiles, defence, or health care devices have been operating management systems for years.
- The **ISO 9001** and **ISO 14001** management system standards now make these successful practices available **for all organizations**.

Processes, not products

- Both ISO 9001 and ISO 14001 concern **the way an organization goes about its work.**
- They are not product standards.
- They are not service standards.
- They are **process** standards.
- They can be used by **product manufacturers and service providers.**

Processes, not products (*cont.*)

- Processes affect final products or services.
- **ISO 9001** gives the requirements for what the organization must do to manage **processes affecting quality** of its products and services.
- **ISO 14001** gives the requirements for what the organization must do to manage **processes affecting the impact of its activities on the environment**.

Certification and registration

- **Certification** is known in some countries as **registration**.
- It means that an **independent, external body** has audited an organization's management system and verified that it conforms to the requirements specified in the standard (ISO 9001 or ISO 14001).
- **ISO does not carry out certification** and does not issue or approve certificates,

Accreditation

- **Accreditation** is like certification of the certification body.
- It means the formal approval by a specialized body - an accreditation body - that a certification body is competent to carry out ISO 9001:2008 or ISO 14001:2004 certification in specified business sectors.
- Certificates issued by accredited certification bodies - and known as **accredited certificates** - may be perceived on the market as having increased credibility.
- **ISO does not carry out or approve accreditations.**

Certification not a requirement

- **Certification is not a requirement of ISO 9001 or ISO 14001.**
- The organization can implement and benefit from an ISO 9001 or ISO 14001 system without having it certified.
- The organization can implement them for the **internal benefits** without spending money on a certification programme.

Certification is a business decision

- Certification is a **decision to be taken for business reasons:**
- if it is a contractual, regulatory, or market requirement,
- If it meets customer preferences
- it is part of a risk management programme, or
- if it will motivate staff by setting a clear goal.

ISO does not certify

- **ISO does not carry out ISO 9001 or ISO 14001 certification.**
- ISO does not issue certificates.
- ISO does not accredit, approve or control the certification bodies.
- ISO develops **standards and guides to encourage good practice** in accreditation and certification.

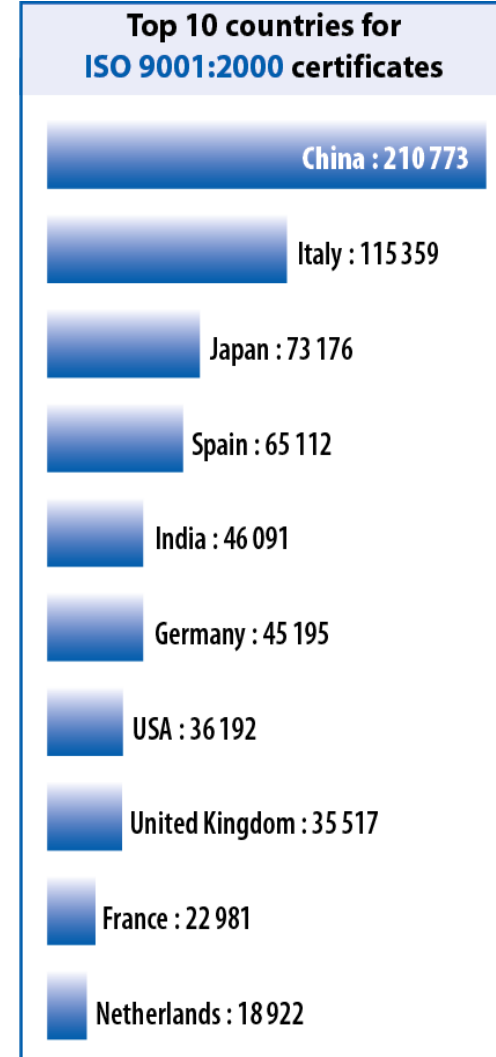
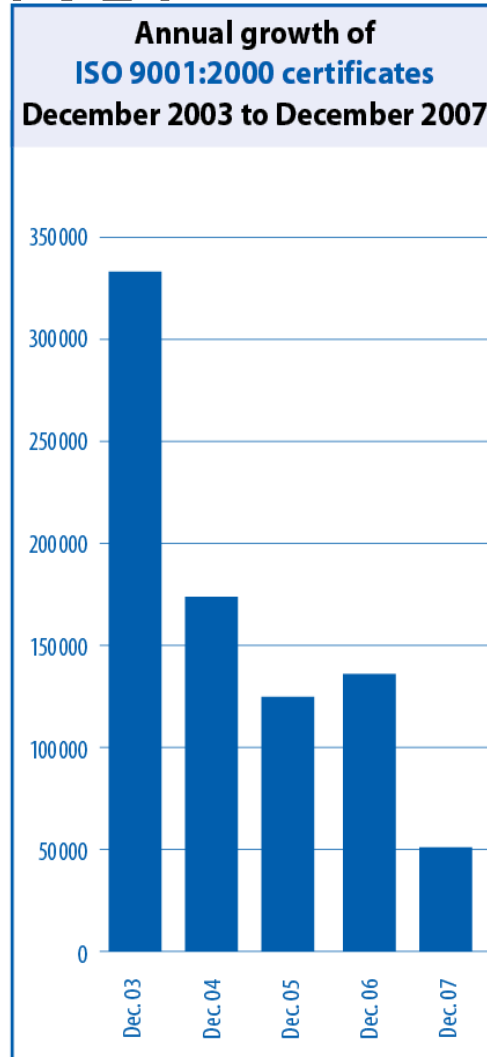
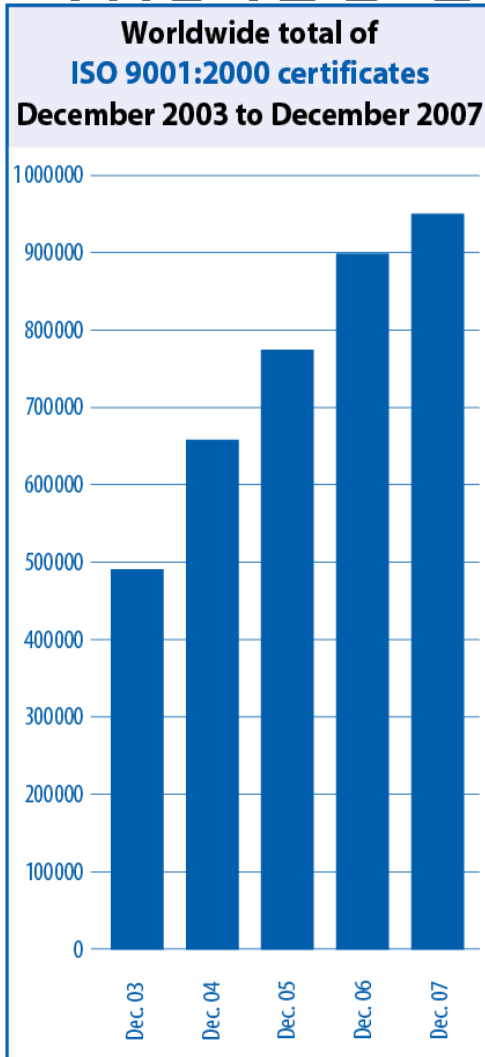
The ISO 9000 family

- **ISO 9001** is the standard that gives the requirements for a **quality management system**.
- **ISO 9001:2008** is the latest, improved version.
- It is the **only standard** in the ISO 9000 family that can be used for **certification**.
- There are **16 other standards** in the family that can help an organization on specific aspects such as performance improvement, auditing, training...

The ISO 14000 family

- **ISO 14001** is the standard that gives the requirements for an **environmental management system**.
- **ISO 14001:2004** is the latest, improved version.
- It is the **only standard** in the ISO 14000 family that can be used for **certification**.
- The ISO 14000 family includes **21 other standards** that can help an organization specific aspects such as auditing, environmental labelling, life cycle analysis...

The ISO Survey

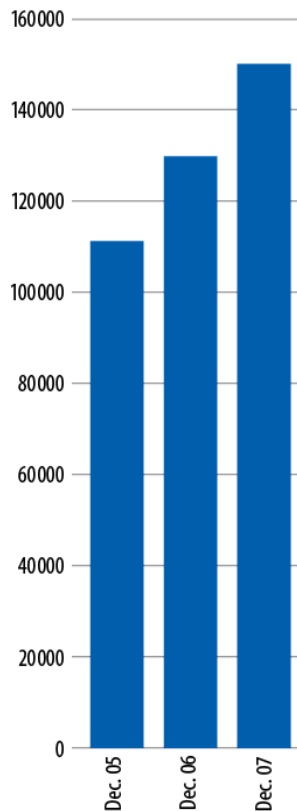


The ISO Survey (*cont.*)

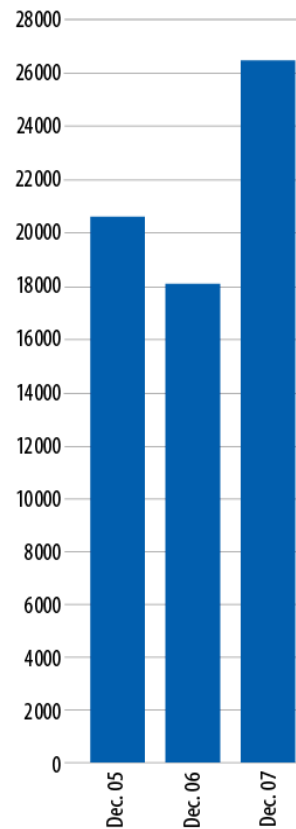
- The **worldwide total of certificates to ISO 9001:2001** at the end of **2007** was 951 486.
- This was **increase of 6 %** over 2006 when the total was 896 929 certificates.
- Certificates had been issued in **175 countries** compared to 170 the previous year.

The ISO Survey (cont.)

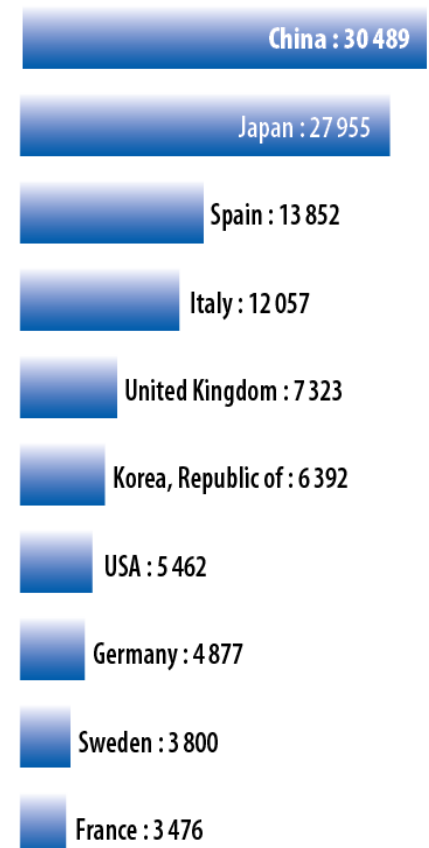
**Worldwide total of
ISO 14001:2004 certificates
December 2005 to December 2007**



**Annual growth of
ISO 14001:2004 certificates
December 2005 to December 2007**



**Top 10 countries for
ISO 14001:2004 certificates**



The ISO Survey (*cont.*)

- The **worldwide total** of **ISO 14001** certificates at the end of **2007** was 154 572.
- This was an **increase of 21 %** over 2006 when the total was 128 211.
- Certificates had been issued in **148 countries** compared to 140 the year before.

Benefits of ISO 9001 and ISO 14001

- International, expert consensus on state-of-the-art practices for quality and environmental management.
- Common language for dealing with customers and suppliers worldwide in B2B.
- Increase efficiency and effectiveness.
- Model for continual improvement.

Benefits of ISO 9001 and ISO 14001

(cont.)

- Model for satisfying customers and other stakeholders.
- Build quality into products and services from design onwards.
- Address environmental concerns of customers and public, and comply with government regulations.
- Integrate with global economy.

Benefits of ISO 9001 and ISO 14001 *(cont.)*

- Sustainable business
- Unifying base for industry sectors
- Qualify suppliers for global supply chains
- Technical support for regulations

Benefits of ISO 9001 and ISO 14001

(cont.)

- Transfer of good practice to developing countries
- Tools for new economic players
- Regional integration
- Facilitate rise of services

More information

- ISO 9000/ISO 14000 section on **ISO Web site:**

www.iso.org

- **ISO Management Systems** magazine

www.iso.org/ims

- **IMS Alerts** free electronic newsletter

www.iso.org/imsalerts

Thank you