1st Annual Quality Congress

3rd & 4th November 2002

Teheran, Iran

Iranian Society for Quality

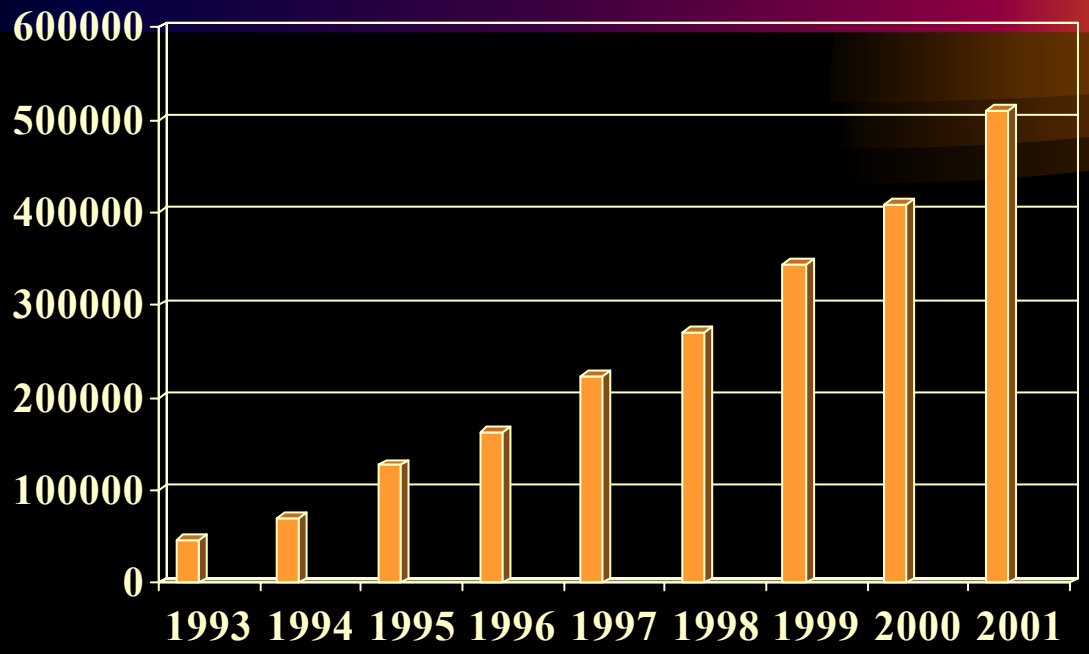
Challenges of Transition
from
ISO 9001: 1994 to 9001: 2000
Live Examples

by Sunil Thawani
thawanis@hotmail.com

Purpose of the Presentation

- To share:
  - Key changes in 9001:2000
  - Challenges of implementing the 9001:2000 with live examples

ISO:9000 – Worldwide Acceptance

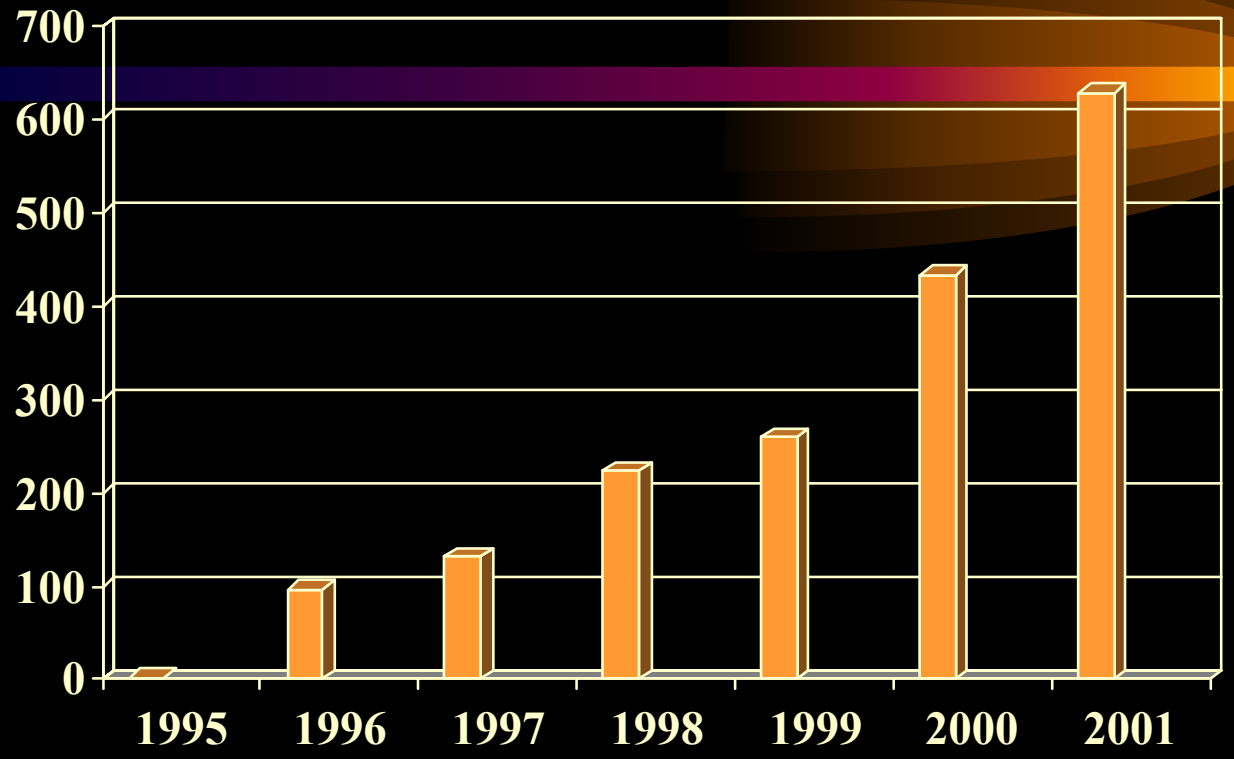


10 fold increase in 8 years. Awarded in 161 countries

No. of 9001:2000 certificates awarded – 44388 (8.70%)

Source – ISO Survey, 11th cycle, Dec. 2001, ISO Geneva.

ISO:9000 – Certification in Iran **



*** As of Aug.' 2002, figure reported by conference organizers as 1700.***
Within GCC, UAE tops with 747 certificates followed by Saudi Arabia with 705.

Source – ISO Survey, 11th cycle, Dec. 2001, ISO Geneva.

ISO: 9001 : 2000 - Key Changes

- In Philosophy, Intent, Objectives, Content & Structure
- Released on 15th Dec. 2000. 405 days left to changeover.

Key Changes:

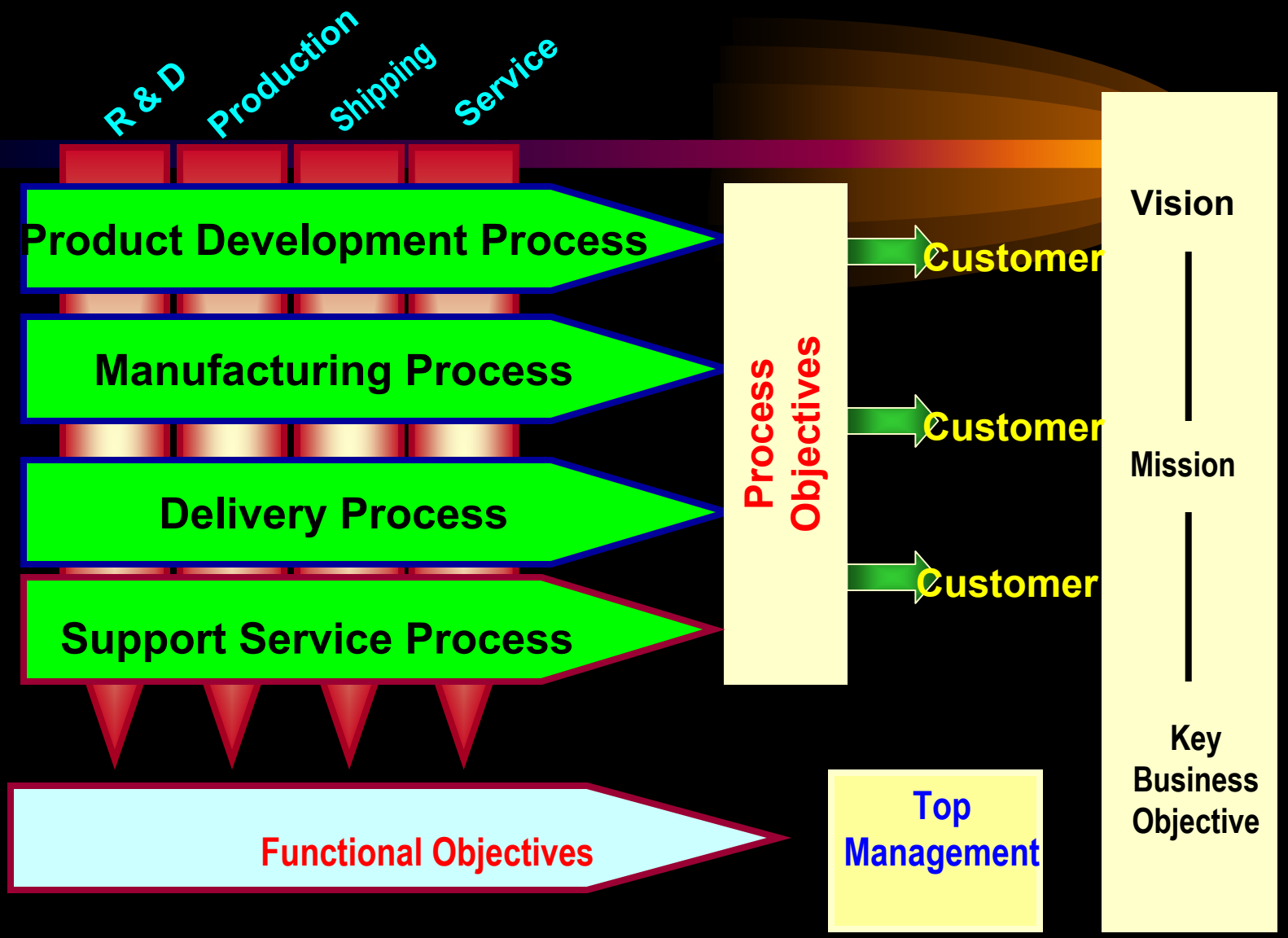
1. PDCA & process based;
2. Alignment between Quality policy & objectives;
3. Measurable objectives;
4. Role of top management;
5. Process based audits with lesser documentation;
6. Effectiveness of training;
7. Competence of personnel;
8. Structure of the standard;
9. Data (fact) based management and
10. Continual improvement.

9001:2000 – Difficult Sub Clauses

Rank	Sub Clause	% Response	Finding
1	Competence, awareness & training	35.5 %	Competency requirement
2	Customer satisfaction	29.2 %	Customer satisfaction data & analysis
3	Continual Improvement	27.5 %	Continual improvement process
4	Analysis of data	25 %	Collection and analysis of data
5	Prevention action	23.3 %	Continual improvement process
6	Quality objectives	21.7 %	Non measurable objectives

Source: Quality Progress, April'02, " ISO:9000 : 2000 Experiences : First Results Are In " by Standford Liebesman and James Mroz. Survey findings of 183 organisations.

Process Mgt. -Work Flow in Functional Organization



Business Processes - Basics

- Work gets done through business processes;
- Processes are at the heart of every organisation;
- Processes create value for customers;
- Processes are " invisible ", repeatable, measurable and flow horizontal across various functions;
- Process is effective if the output meets customer needs;
- Process is efficient when it is effective at the least cost;

" If you cant' describe what you are doing as a process, you do not know what you are doing " – Dr. Deming

Element vs. Process Approach to Documentation

- 9001:94 “fragmented” the business processes & thereby created shadow quality system e.g.
  - Purchasing, inspection, Storing “ process “ was documented as 3-4 independent WIs to meet 4.6, 4.10, 4.12, 4.15 and 4.8

vs.

  - Single integrated continuous process - Ordering & Storing. (9001:2000 requirements get integrated in process).
- Challenge is to bring various functions together, resolve inter department issues and “ change” years of silo functional mind set
- Start managing business as a system of interacting processes.

Process Management - Dr. Deming Cycle

- Developed in 1920s by Mr. Shewhart.
- Extensively used by Dr. Deming.
- Applicable in all areas of our life, processes.

Process Flow Maps - Samples

- Macro Level Business Process Flow Sample
- Micro Level Process Flow Sample

Purchasing Process–SIPOC Sample Model

Supplier	Maintenance Department.
Input	Purchase Requisition
Process Control	Quality, Quantity, Approved vendor list.
Outputs	Quotation, Purchase Order, Goods, Documentation
Customer	Purchase department for Requisition; Vendor for Quotation and Purchase Order, Stores for receipt of goods and documents Maintenance for using goods
Process Efficiency & Effectiveness Measures	Internal and external lead time in days. % of acceptable goods received on time.

Benefits of Process Approach

- User friendly
- Integrates QMS with routine work;
- Makes process visible;
- Provide common and actual knowledge of the complete process to employees;
- Easy to examine logic or lack of logic in sequence of steps & uncover potential problems, rework loops;
- Effective business management methodology;
- Provide basis for improvement – Six Sigma, BPR etc.

Alignment Between Quality Policy and Objectives

- " System must have an aim. There is no system without aim " – *Dr. Deming*
- Policy & objectives to be aligned with SMART objectives (Specific, Measurable, Achievable, Relevant, Time based) e.g.
  - Q/policy : "Delight Customers"
  - Q/objectives : Reduce customer order delivery time from 12 days to 2 days by Dec.'2002
- Objectives can be cascaded to include process measures
  - P/Measure : Measure lead time from receipt of customer order to delivery of product at customers premises in days ". To be reported by Sales Manager on monthly basis.

Quality objectives can be dynamic instead of framed statements

SMART Objectives Sample

Obj. No.	Objective	Objective Owner	Measure	Unit	Frequency
1	Reduce customer order delivery	Marketing	Time taken from	Days	Quarterly
	time by 25% from the current level	Manager	order booking to		
	by Dec. 2003		delivery		
2	Improve customer satisfaction	Vice President	Customer	No.	Six monthly
	index by 15 points by Dec. 2002 &	Customer Care	Satisfacion		
	another 10 points by June 2003		Index		

Involving " Reluctant" Top Management

- Top management's language – market share, cost, time, profitability, customer satisfaction, defects, etc.
- Collect & analyse data on:
  - Customer feedback-complaints, satisfaction;
  - Process performance – cycle time, cost, capability;
  - Product failure;
  - Chronic quality problems and proposed solutions
  - Continual improvements;
  - Benefits of QMS etc.
- Feed data to top management
- Include top management in audits for quality policy, objectives, resources, customer needs, satisfaction

Measure, Analyse, Improve & Data based management requirements of the QMS should help

Process Based Audits

- Challenging in absence of limited documentation;
- Audit plan to be process based instead of usual from element based;
- Process objectives, inputs, outputs, control points, measures need to be clearly defined and understood by Auditors (SIPOC);
- Ease of following horizontal audit strategy e.g. follow through from purchase requisition, purchase order, receipt, inspection.
- Process audits proven to be quite effective and
- Provide good opportunity to Auditors to improve QMS.

Evaluating Effectiveness of Training

- Feedback was treated as evaluation of training; No longer adequate since it is usually is for the Trainer;
- Design of programs will require change
  - Feedback need not be immediate after the program;
  - Formal evaluations to be added in some programs
- Monitor performance during work.

Competence of Personnel

- Trained but not competent or Competent but not trained – common scenario;
- Significant and challenging new requirement;
- Has impact on degree of documentation – Higher the competence lower the need for documentation;
- Applicable for other skills like problem solving, conducting meetings, facilitation etc.;
- Job descriptions, skill matrices, checklists can address requirements.

Structure of the Standard – Document Numbering

- 20 elements reduced to 5 elements;
- Major issue for organisations adopting element based numbering (1001FIPR, 0602PUPR);
- Can adopt process based *Parent – Child* Relationship

  (ABC – MFG – PKG – 007)
  - ABC : Name of the organisation/ branch
  - MFG : Manufacturing process
  - PKG : Packing procedure belonging to manufacturing process
  - 07 : 7th procedure under manufacturing process.

  (ABC – MFG – PKG – 001 – WI01) - first WI of packing procedure.

Independent of structure of standard in future.

Reinforces process based working

Data (Fact) Based Management

- Intent is to achieve fundamental shift from opinion based management to data based management;
- Use data for strategic and operating decisions;
- Train employees in statistical techniques – Pareto, Ishikawa diagram, Histogram, Check sheets, KPIV, Measurement System Analysis, Design of experiments etc.

Continual Improvement

- Long felt need, addressed after 13 years;
- Top management responsible;
- Part of Quality policy;
- Provide evidence of gradual continuous improvement;
- Train employees in problem solving skills like Six Sigma, BPR, 5-S, Gemba Kaizen etc.;
- Documented problem solving process will be quite helpful.

Conclusion

- Implementing & auditing 9001:2000 is challenging. And can be quite rewarding;
- Still being “ discovered”;
- Treat transition as major strategic project;
- Involve all concerned, including HR, IT;
- Use it as an opportunity to break inter department “ barriers”, adopt process management, continually improve process and products to achieve:

Prosperity through Quality

Thank you

Any questions please