

ISO 9000 - - CONCEPT AND IMPLEMENTATION IN A SERVICE SECTOR

*Samir Kumar Jain ** Rishi Agrawal

ABSTRACT

Till recently the approach in industry was towards appraisal and correction of quality which can be called as quality through inspection. The same is now getting changed as Quality Assurance Approach. ISO 9000 is an international series of standards which intends to achieve the same.

They are also known as contractual standards. Any organisation who is in the field of supplying products and services and comprising of 10 to 10,000 people can adopt the standard. These standards are advantageous as they inspire the customers, reduce multiplicity of inspection, improves efficiency, reduces wastage improves potential of exporting, provides systematic working environment etc.

In this paper an attempt has been made to lay more emphasis on the implementation of ISO 9001 in service organisation, its requirement and mandatory documents required for its implementation.

In India, many purely service sector organisations are implementing these standards. Certification may or may not be required, but definitely the concept of quality assurance systems can be effectively used for improved "customer satisfaction" in the service sector also.

PREAMBLE

The concept of total quality has to be imbibed in industries and in technical education. Only quality product would go ahead. ISO - 9000 is more like a movement to encourage it. A company, that gets ISO - 9000 recognition receives global market. In the technical education, these points of quality and ISO - 9000 need be emphasized. This way, ISO - culture would be inculcated.

INTRODUCTION :

ISO Stands for International Organisation for Standardisation. It is an

international body working on standardisation activity, located in Geneva, Switzerland. The organisation comprises national standards bodies of 91 countries including India. It is made up of 180 technical committees. Each committee is responsible for an area(s) of specialisation.

What is ISO 9000? It is series of standards that the international standards organisation has published on Quality Management System. The manufacturers who wish to export their goods to the European customers with effect from December 1992, are supposed to meet the requirements of this standard. In 1987, 6

* IIIrd year Electronics, M.A.C.T. Bhopal

** IIIrd year Mechanical M.A.C.T. Bhopal

standards were issued by Technical committee number 176, one on standard terminology, and 5 standards (known as ISO 9000 series) which clarify relation between quality concepts and present 3 models for quality assurance systems. It took 11 years from 1976 to publish the standard. This standard is on Quality Management System.

THE FIVE ISO 9000 STANDARDS :

ISO 9000 - It is a guideline document for selecting and using one out of the four standards on Quality Management and Quality Assurance.

- ° Thus ISO 9000 is not really a standard. No company, therefore, gets a certificate to ISO 9000 per se.
- ° When we generally talk about this, we are actually using ISO 9000 as a generic term representing that particular part of the series against which certification is obtainable.

ISO 8402 -

It is Vocabulary standard brought out by ISO in 1986 which defines words used in the ISO 9000 series of system standards. Words needing interpretation like Quality, Quality Assurance, Quality Management, Quality Policy etc. are all defined in this vocabulary standard.

ISO 9001 -

It is model quality system for Quality Assurance in Design/Development, Production, installation and servicing.

- ° This 9001 is applicable to organisations who themselves design the products/services which they manufacture/produce and sell to their customers.
- ° In other words, the customer is also buying their design capability besides the actual product/service.
- ° Examples of ISO 9001 certified companies in India are Widia (India)

Ltd., Kirloskar Ltd., and Crompton Greaves Ltd.,

ISO 9002

It is a Model Quality System for Quality Assurance in Production and Installation.

- ° It is applicable to organisations who produce and sell standard products/services.
- ° There is no designing involved as the designs are either frozen standard designs of the company like a Hotel Menu or designs provided by the customers for making.
- ° In other words, this company is not required to have its own internal design capability as this capability is not purchased by the customer.
- ° Examples of ISO 9002 certified companies in India are Sundaram Fasteners, Sundaram Abex, Brakes India (Foundry Division) and Modi Zerox (Kanpur)

ISO 9003

It is a Model Quality System for quality Assurance in Final Inspection and Testing.

- ° This applies to an organisation which has no design or manufacturing capability of its own. It only buys out various components from sub-contractors, assembles these components, tests the assembled product and sells the finished product to the customer.
- ° This standard is not much used now a days. In India, there is not a single company certified to this standard primarily because the scope is restricted to Final Inspection and testing only.

ISO 9004

This is a Guideline Standard for quality Management and quality system elements.

- ° As its name suggests, it is only a guideline on how to implement quality systems. There is nothing mandatory in ISO 9004. It is only a lot of good

advise. Therefore, no company can be assessed against this standard.

- Thus there is no certification possible even to the ISO 9004 standard.
- Nevertheless, it is definitely useful to a company which wants to set up Internal quality system without necessarily wanting to get certified by a third party.

ADVANTAGES OF ISO 9000 SERIES :

- Exports of the company can be increased as ISO 9000 system standards are globally accepted in 91 countries (including Japan and USA).
- It helps the company achieve consistent levels of quality.
- The overall image of the company in the market is likely to improve.
- It inspires confidence in the company's existing potential customers that the company is capable of delivering quality goods and services at the right price and right time.
- Market share can go up with the resultant improved market credibility.
- Company's own Management has greater confidence in its own internal systems.

- Company becomes more cost effective as the system facilitates Waste Reduction.
- Insurance companies have more faith in the company's products/services and may quote less premium for covering the company's product/services against Product Liability Suits.
- System Orientation facilitated by ISO 9000 series reduces inefficient expenditure of time, resources and energy, solving the same, recurring chronic problems.
- The systematic approach to problem solving results in elimination of chronic problems by taking care of the root causes.
- This enables better utilisation of Management time.
- Employees feel less frustrated as their efforts are more efficiently and effectively used in the absence of fire fighting.

Last, but definitely not the least, ISO 9000 implementation puts company on the Road to Total Quality Management (TQM).

A Comparison :

INTERNATIONAL STANDARDS

CORRESPONDING INDIAN STANDARD

ISO 8402 : 1986 Quality
Vocabulary

IS-13999 : 1988 Quality System
Vocabulary (Identical)

ISO-9000 : 1987 Quality
Management & quality assurance
standards: Guidelines for use

IS-14000 : 1988 Quality System
Guideliness for selection & use of
standards of quality system (Identical)

ISO-9001 : 1987 Quality System
Model for quality assurance in
design/development, production,
installation & servicing

IS-140001 : 1988 Quality System
Model quality assurance in
design/development production,
installation & servicing (Identical)

ISO-9002 : 1987 Quality System
Model for quality assurance in
production & installation

IS-14002 : 1988 Quality Systems
Model for quality assurance in
production & installation (Identical)

ISO-9003 : 1987 Quality Systems
Model for quality assurance in final
inspection & test

IS-14003 : 1988 Quality systems
Model for quality assurance in final
inspection & test (Identical)

ISO-9004 : 1987 Quality
Management & Quality systems
elements - Guidelines

IS-14004 : 1988 Quality systems
Guidelines on elements of Quality
Management Systems
(Technically equivalent)

ISO 900 AND TQM :

The ISO 9000 series is nothing but a set of standards for quality Assurance system. The Japanese have been using quality Assurance concepts and principle as part of their TQM implementation programmes without giving them any number like ISO 9000. Thus ISO 9000 or any Quality Assurance activity is an integral subset of any TQM implementation programme.

TQM is a never ending quest for achieving new levels of performance. Tomorrow's target are set higher when today's are achieved. A quality Assurance system like ISO 9000 will only help in achieving consistent quality of our output. Through TQM one can achieve continuous improvement in quality levels. In other words, TQM helps in innovating and improving while ISO 9000 Quality Assurance systems help in maintaining these improvements consistently. The figure given below will help in illustrating this better :-



TQM & ISO 9000 Interrelation

IMPLEMENTATION OF ISO 9001 IN SERVICE ORGANISATION :

1) ISO 9000 In A Service Organisation :

The ISO 9000 series of standards is a general standard applicable globally to any

industry or business organisation regardless of the number of people it employs or the type of product service it provides. Essentially, it is a series of standards for providing assurance to customers. Therefore, ISO 9000 is applicable to any organisation which has customers.

In India, many purely service sector organisations are implementing quality systems. Certification may or may not be such a pressing need for service organisation, but definitely the concept of quality assurance systems can be beneficially used for improved customers satisfaction in the service sector also.

2) KEY DIFFERENCES IN IMPLEMENTATION OF ISO 9001 IN A SERVICE ORGANISATION :

The key differences are as follows :

- 2.1 The product or output of a service organisation is mostly intangible. eg. The background paper of a workshop is a tangible output. But the entire workshop itself and its impact is intangible.
- 2.2 Historically, measurement systems for intangible outputs have not been so elaborately evolved and used as they have been in a tangible output environment.
- 2.3 A service output can not be therefore, always inspected or tested out as OK or NOT OK before despatch to the customer. eg. courtesy of staff to visitors can not be inspected to segregate any lack of courtesy. If bad words or gestures are used with the visiting customers, there is no way of retrieve or undo the damage. Unlike in a manufacturing environment, where the outputs are made in a factory away from the customers, in a service organisations the productions of the of the output takes place in front of the customers. It is more important to get the right things right the first time, as in a service environment, the second time never comes.

2.4 The human interfaces have a much greater bearing on service quality than on product quality, and people do make all the difference in a service organisation.

In a product environment, customers are in touch with only a few of the company's employees that too at the senior level and in areas like Marketing or Design. Very rarely, does the customer come in contact with the line operators. In a service organisation, the customers are in contact with these front line people all the time. e.g. A person may stop going to a particular hotel, even if the food there were excellent, if one is not satisfied with the behaviour of the waiters or the stewards.

2.5 Operational staff in service organisations need to be much better communicators than what may be required of them if they were in a manufacturing organisation.

2.6 Advance planning, proper training of all staff and all other quality Assurance activities probably are needed much more in a service organisation than in a manufacturing organisation. e.g. Male staff with a stubbled chin, unpolished shoes, grimacing faces etc. are examples of instances where customer can perceive lack of quality in an organisation.

3) ISO WILL HELP ANY ORGANISATION TO SYSTEMATICALLY.

- 3.1 Identify correctly and adequately the requirements of its customers.
- 3.2 Use people, resources and processes internally to produce goods or services that satisfy these requirements.
- 3.3 Review the customers satisfaction with these goods.
- 3.4 Take corrective action to prevent recurrence of dissatisfactory results in the future.

4) THE 20 REQUIREMENTS OF ISO 9001

Clause No.	Requirement
4.1	Management responsibility
4.2	Quality System
4.3	Contract Review
4.4	Design Control
4.5	Document Control
4.6	Purchasing
4.7	Purchaser Supplied Product
4.8	Product identification and traceability
4.9	ProcessControl
4.10	Inspection and testing
4.11	Inspection, measuring & test equipment
4.12	Inspection and testing
4.13	Non-conformity control
4.14	Corrective action
4.15	Handling, Storage, Packing & Delivery
4.16	Quality records
4.17	Internal Quality audits
4.18	Training
4.19	Servicing
4.20	Statistical Techniques

4.1 Management Responsibility :

This clause lists down the responsibilities of the company's management vis a vis quality system implementation.

This includes defining a quality policy, assigning specific responsibilities, providing resources, training, reviewing the effectiveness of the systems etc.

4.2 QUALITY SYSTEM :

This will refer to the entire systems and its comprehensiveness in terms of

- (a) Documentation in all the 20 areas of ISO 9001
- (b) Effective implementation of the approved documents in all functions.

4.3 Contract Review :

This means reviewing our commitment or promise to the customers. Most service organisations will not have a strict contract with the customer. However this concept of reviewing whether what we plan to supply is made according to what the customer expects or wants is definitely applicable in a service environment.

4.4 Design Control :

This refers to how the process of designing the service is controlled and verified for adequacy and effectiveness.

4.5 Document Control :

This refers to all documents in the quality system like check lists, forms, dos and dont, instructions etc. and how they control in terms of approval, availability at work spot, removal on becoming obsolete etc.

4.6 Purchasing :

This refers to control over quality of purchased material which will directly or indirectly get used in our service

4.7 Purchaser Supplied Product :

This refers to items/facilities provided to us by our customers while we are providing them some service. eg. in an uncompany training programme the hall, seating arrangements, OHP, tea, lunch etc. are customer supplied products.

4.8 Product Identification And Trace Ability :

This clause does apply in a united sense to a service environment. It means what is the mechanism for tracing back/identifying a service.

eg. Simple things like this background paper is meant for which seminar? seminar for which customer? and to be conducted on which date?

4.9 Process Control :

This refers to how the process of delivering a service is controlled. Unlike in manufacturing environment, most process

in a service environment are carried out or delivered by human beings.

eg. reception given to an officer-visitor.

4.10 Inspection and Testing :

This clause has greater application in a manufacturing environment when products are to be checked for conformance.

It does have relevance in a service environment also in terms of checking the correctness of tangible outputs like letters, printed documents and seminar administrative arrangements.

4.11 Inspection Measuring And Test Equipment :

This is more stringently applicable to a manufacturing environment when a lot of guages, indicators or gadgets are used for checking the acceptability of product.

This clause details out how the accuracy of verifying instruments need to be checked and maintained. The technical term of this is calibration.

e.g. clocks being used in offices worn by the service providers need to be showing right time if the service delivery has to be controlled properly.

4.12 Inspection And Test Status:

This refers to the means of indentifying whether a product is okay for use or not.

e.g.if error in an "all member circular"are noticed just before it is to be issued, one may regret these circulars by labelling them as 'not for use' or not to be issued'.

4.13 Non-conforming Control :

A non-conformity is a deviation from a laid down norm. This clause refers to how these deviations are controlled.

4.14 Corrective Action :

This refers to the measures required to be taken to prevent non-conformities from recurring.

4.15 Handling, Storage, Packing & Delivery:

This Refers to the appropriate methods and means to be used in the handling, storing, packing & delivering of products.

4.16 Quality Records :

This refers to the proper storage, maintainance and retrieval system for all records in the quality system.

4.17 Internal Quality Audits :

These are cross-functional, objective reviews of the quality system in different areas.

4.18 Training :

This refers to the system of indentifying and providing for the training needs of all employees.

4.19 Servicing :

This clause has relevance only in a manufacturing environment. eg. servicing of a computer or a xerox machine on a contract basis.

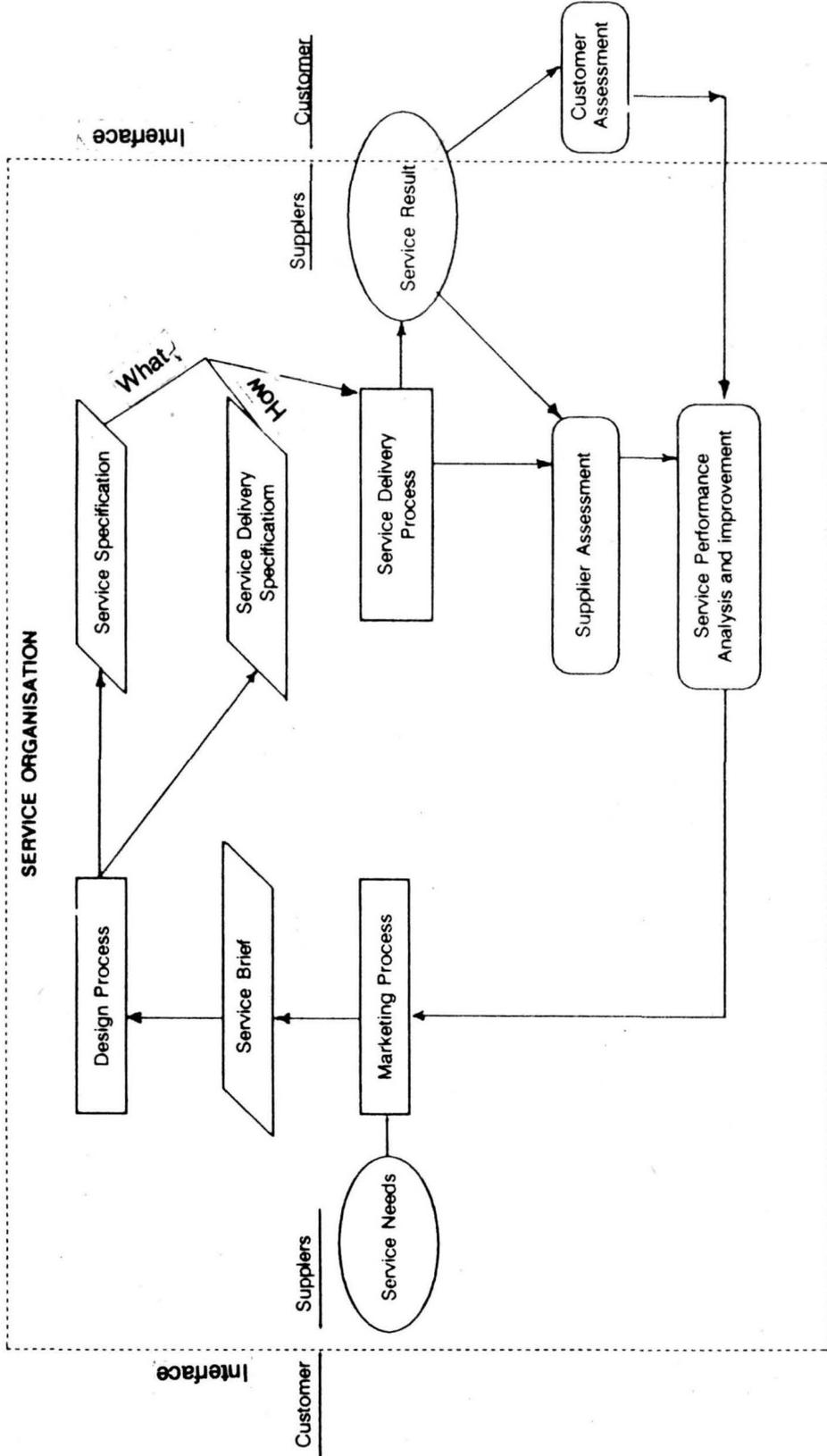
4.20 Statistical Techniques :

Traditionally, they have been used in manufacturing industry much than in service sector.

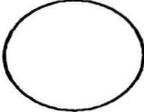
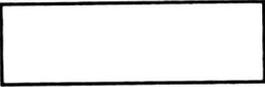
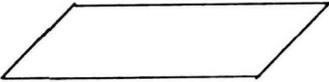
5 Service Quality Loop (ISO 9004 Part-2)

ISO 9004 part-2 is a guideline standard issued by ISO recently for implementation by ISO 9001 in a service organisation. (The diagram for ready reference is given below)

THE SERVICE QUALITY LOOP



KEY TO SYMBOLS USED IN "SERVICE QUALITY LOOP"

SYMBOL	→	KEY
1. 	→	Service Needs/Results
2. 	→	Service Processes
3. 	→	Service Process Documents
4. 	→	Service Measures

MANDATORY DOCUMENTS REQUIRED BY ISO 9001

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Quality Policy 2. Quality Objective 3. Responsibility and authority definition 4. Identification of verification activities 5. Appointment of a management representative 6. Management review system 7. Quality system documentation 8. Contract review procedure 9. Design control procedure 10. Design change procedure 11. Document control procedure 12. Master list or equivalent document control procedure 13. List of approved sub-contractors/ vendors 14. System for reviewing and approving purchasing documents 15. Purchase supplied product procedure 16. Service identification and traceability procedure 17. Operating work instructions 18. Safety instructions 19. Service delivery plan 20. Preventive maintenance schedule of equipments | <ol style="list-style-type: none"> 21. Training requirement for personnel involved in specialised service 22. Service verification procedure <ul style="list-style-type: none"> ◦ input raw material stage ◦ prior to processing ◦ during processing 23. Calibration procedure 24. Verification status procedure 25. Non conformance control procedure 26. Reverification procedure 27. Corrective action procedure 28. Handling procedure 29. Storage procedure 30. Packing procedure 31. Delivery procedure 32. Quality records procedure 33. Internal audit procedure 34. Internal audit schedule 35. Audit follow up procedure 36. Training procedure 37. Special training procedure 38. Servicing procedure 39. Statistical techniques procedure. 40. Customer complaints handling procedure. |
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"ISO 9000" IMPLEMENTATION

WHAT HELPS	WHAT DOES NOT
1. Real need	1. Lip service
2. Visible commitment from top MGT.	2. "Commitment delegation"
3. Leading by example at all levels	3. Inconsistency in practice (w.r.t. stated policy)
4. TOM attitudes/culture	4. Just get a 'Certificate'
5. Involvement of users in system design	5. Consultant approach
6. Flexibility of system to suit company's specific need/environment	6. Strait jacketing of system, unnecessary rigidity
7. Customers kept foremost in mind	7. Customer unfriendly system
8. "FAMILY GROUP" Approach to training by internal trainers	8. Too much of "class room" training
9. Effective problem solving based on data	9. AD-HOC "HIT & MISS" corrective action
10. Real Team work	10. Personal criticism/ego.

CONCLUSION :

Though the ISO 9000 does not talk about cost directly, it is found that after implementing this standard, since the emphasis is on prevention of faults rather than on correcting them, tremendous benefits accrue to the manufacturer.

This standard does not talk only about the technical aspects, but even covers the areas like training needs of the employees, which the management should define and see that these are satisfied. So it is necessary to follow ISO 9000 sincerely to compete in both international and national market.

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