ISO 9000: A Springboard for BPM

Sam Anbazhagan

Introduction

During the year 1990, in our part of the world, Quality was a big topic; especially for companies exporting their products. We started hearing about Deming and Juran. We became very enamored of them and their writings. *Quality* became the mantra for survival and growth in a globalizing business environment.

Then news of the ISO 9000 series of standards arrived. Even if it was not applicable, everyone thought it a good idea to know something about it. Some companies pioneered and took advantage of early implementation; some thought they were beyond it while others thought they weren't quite up to it. The early adopters were subsequently able to move towards NBQA or EFQM by managing quality.

Years have has passed and, after two decades of implementing the standard, as in many subjects, the reviews—official and unofficial--are mixed. The mixed reviews may be a result of confusion about the standard – its features and potential. Despite the reviews, statistics show a steady increase in the number of organizations adopting it around the world.

Now with BPM emerging as an IT enabled Management and a recognition that companies that adopted the ISO 9000 standard are in a better position to adopt BPM, there seems to be a need to take a renewed look at this standard. In this Article, I attempt to present a practitioner's view of what this standard means.

I will begin with a brief overview of the documentation requirements followed by a discussion of the following topics:

- Implementation,
- "The people's side" of the implementation process.
- Why adopt the ISO 9001 Standard
- How to begin,
- Terms and definitions- to be treated more as a guide than for scholarship,
- Other features of the standard,
- For whom the standard is applicable,
- The principled path to excellence.

The Requirements

ISO 9001 is an International standard for Quality Management System – Requirements.

The core elements of the standard are:

Quality Management Systems--General requirements, Documentation requirements;

Management responsibility--Management commitment, Customer focus, Quality policy, Planning, Responsibility, authority and communication, Management review;

Resource management--Provision of resources

Product realization--Planning product realization, Customer-related processes, Design and development, Purchasing, Production and service provision, control of monitoring and measuring devices;

Measurement, analysis and improvement--General, Monitoring and measurement, Control of nonconforming products, analysis of data, Improvement.

Requirements may be classified as follows for easy reference.

- Responsibility of top management
- Documentation
- Departments' responsibilities

Responsibilities of top management include:

- Defining and communicating responsibilities
- Appointment of Management Representative
- QMS planning
- Facilitating setting of objectives
- Communication process
- Regular review

Documentation includes:

- Quality policy
- Quality objectives
- Quality manual
- Procedures as required
- Documents required for planning, operation and control
- Records

Department responsibilities include:

- Provision of resources
- Planning and developing processes for product realization, including customer related processes
- Design and development
- Purchasing
- Production and services provision
- Control of monitoring and measuring devices
- Measurement, analysis and improvement
- Internal audit
- Monitoring and measurement process

- Control of non-conforming product

- Analysis of data

- Improvement through corrective action and preventive action

Documentation

The Quality Manual is the document describing how an organization meets these requirements and also serves as a guide for implementation.

The following documents are mandatory and are part of the quality manual:

- Procedure for preventive action

- Procedure for corrective action

- Control of non-conforming product

- Procedure for internal audit

The documented quality policy and quality objectives are also part of the quality manual.

In turn, each department may also have a Departmental Quality Manual describing departmental responsibilities, objectives for the year, organization structure, resources available, process chart – descriptive and diagrammatic- with MMIs and KPIs, procedures, work instructions, forms, level wise responsibilities, communication matrix and so on as required for the department.

It is good to note regarding documentation what is mentioned in the standard:

"The extent of the quality management system documentation can differ from one organization to another due to

- the size of organization and type of activities,

- the complexity of processes and their interactions, and

- the competence of personnel

The documentation can be in any form or type of medium."

Based on the above it is to identify the freedom available for documentation and avail it accordingly as required. It is absolutely up to the organization regarding the extent of documentation.

It must also be noted that all the documents are amenable for revision as changes and improvements take place in the organization.

Viewing the Standard from an implementation angle

Here is the sequence of activities that should take place at the implementation stage.

- A proposal to adopt the standard from management

- A preliminary review, preferably by an external agency, with regard to the requirements of the standard; any organization would have most of them in place under different names and at varying stages of maturity; the review would indicate the extent of the gap in areas needing improvement and include:

    A discussion and decision to implement the standard

    The appointment of Management Representative

    Training on PDCA, Systems approach, Process approach, IT enablement and other inputs

    Documentation at departmental and company levels, including bridging the gap as much as possible prior to documenting

Implementation and taking necessary preventive actions

Internal audit, external audit and corrective actions

Management review

Revision of documentation incorporating decisions made in management review and a plan to move to the next cycle of implementation.

The decision to go for it

When the decision is made to go for it, it is best to keep in mind the 'Introduction' to the standard:

"The adoption of a quality management system should be a strategic decision of an organization."

This means that implementation of a QMS would not immediately and directly improve the quality of the product. Such improvement may happen by installing an asset or by introducing a specific procedure in a department. But introduction of a QMS would improve gradually, firmly all aspects that contribute to quality over a period of time.

Consider the people's side of the implementation process!

The implementation process provides roles for the implementers which, simply stated , would be different from their normal roles and go beyond their normal day-to-day activities. For example, individuals get assigned as Departmental Representatives, Internal Auditors, Trainers and the like. They learn to document the processes, identify KPIs, design forms. The auditor's role provides an opportunity to become familiar with other departmental work and, in the process, to offer certain suggestions for improvement as an outsider.

The implementation process is highly interactive between and at various levels with individual purpose improvements, big and small. The auditor's discover many things during this process and begin to take ownership.

The role of Management Representative is an important one. It is a catalytic role. It is a relational role. It requires substantial knowledge – about the standard, about related subjects, about the company, about productivity and so on. The role may be termed, in Greenleaf's words, a 'servant leader'. A role to educate, inspire and to instruct, if need be. The Management Representative makes the entire effort a collective one, a comprehensive effort and a continued effort.

As time passes, it may become static or dynamic depending on how new individuals are introduced to the system. Any lapse in ongoing commitment from the CEO or a poorly chosen MR may undermine the system. It is afterall the people who make the system come alive.

Why adopt the ISO 9000 Standard?

The two quotations cited below offer the best answer to this question.

"Activities are the basic units of competitive advantage. Overall advantage or disadvantage results from all a company's activities, not only a few.

Constant improvement in operational effectiveness is necessary to achieve superior profitability. However, it is not usually sufficient."

- Michael E.Porter, 'What Is Strategy?', Harvard Business Review, November- December 1996

And to quote from the standard:

"Process approach: This International Standard promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system, to enhance customer satisfaction by meeting customer requirements.

For an organization to function effectively, it has to identify and manage numerous linked activities. An activity using resources, and managed in order to enable the transformation of

inputs to outputs, can be considered as a process. Often the output from one process directly forms input to the next.

The application of a system of processes within an organization, together with identification and interactions of these processes, and their management, can be referred to as the 'process approach'.

An advantage of the process approach is the ongoing control that it provides over the linkage between the individual processes within the system of processes, as well as over their combination and interaction.

When used within a quality management system, such an approach emphasizes the importance of

- understanding and meeting requirements,

- the need to consider processes in terms of added value,

- obtaining results of process performance and effectiveness, and

- continual improvement of processes based on objective measurement."

So, why an organization may opt to adopt ISO 9001 standard?

It is considered one of the better ways to function effectively – the necessary condition to move forward and later achieve the sufficient conditions for profitability!

How to begin and proceed?

In addition to adopting a process approach, the standard recommends that the methodology known as "Plan-Do-Check-Act" (PDCA) be applied to all processes.

Plan establishes the objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies.

Do: implement the processes.

Check: monitor and measure processes and product against policies, objectives and requirements for the product and report the results.

Act: take actions to continually improve process performance.

Terms and Definitions

The terms used in the standard are defined and provided as a separate standard for better understanding. They must also become a part of the organization's vocabulary to promote a common understanding in the organization.

Some people would have a tendency to criticize the definitions, to question the definitions. They probably think that it is the end-of-the-world definition, an Absolute. But they do not realize that it can also be treated as a stepping stone definition to begin the work and refine the understanding as one goes along. Such a tendency is found constructive and pragmatic.

For whom the Standard is applicable

"This International Standard specifies requirements for a quality management system where an organization

- needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and

- aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements."

We know experience that companies function in various states of effectiveness in different areas of work:

- producing inconsistent quality

- producing consistent quality, but not meeting customer requirements

- fulfilling customer requirements, but not the regulatory requirements

- meeting regulatory requirements, but not able to enhance customer satisfaction

- able to enhance customer satisfaction, but not able to provide assurance to customer

- able to provide assurance to customer, but not to regulatory authorities

- able to assure confidently of exceeding the expectations of customer and regulations.

The quality management system enables an organization to improve the processes from one level to a higher level, iteratively, and reaching a state of excellence over a period of time. This happens because of the process approach enabling the functional departments to see the horizontally as well as vertically flowing processes – across the departments as well as within the department - and the importance of ensuring quality at every stage internally so that when the product moves out of the organization to the customer it fulfills the requirements.

In a way the quality management system helps to provide a window to an organization's processes, if not necessarily accomplishing 'silo busting' as Puneet Suppal suggests. Illuminating a company's processes is an important step toward understanding and adopting BPM.

Other features of the Standard

ISO 9001 standard actually is one of the consistent pair of quality management system standards. The other standard is ISO 9004.

ISO 9004 provides guidance on a wider range of objectives relating to a quality management system than ISO 9001, especially for the continuous improvement of an organization's overall performance, efficiency and effectiveness.

ISO 9004 is similar to EFQM or NBQA model for business excellence.

ISO 9004 is recommended as a guide for organizations whose top management wishes to move beyond the requirements of ISO 9001.

Compatibility with ISO 14001 Standard and other Management Systems

"This International Standard has been aligned with ISO 14001 in order to enhance the compatibility of the two standards for the benefit of the user community."

This standard enables an organization to align or integrate its own quality management system with related management system requirements, such as environment management, occupational health and safety management, financial management, risk management and so on.

For more information on this subject, "Linking Risk Management and ISO 14001" by David McCallum and Isis Fredericks is an excellent reference.

The Principled Path to Excellence

The quality management system standard is based on eight quality management principles. These principles can be used by senior management as a framework to guide their organizations towards improved performance. They are:

■Principle 1: Customer focus

■Principle 2: Leadership

■Principle 3: Involvement of people

■Principle 4: Process approach

■Principle 5: System approach to management

■Principle 6: Continual improvement

■Principle 7: Factual approach to decision making

■Principle 8: Mutually beneficial supplier relationships

For a detailed discussion of these principles go to:

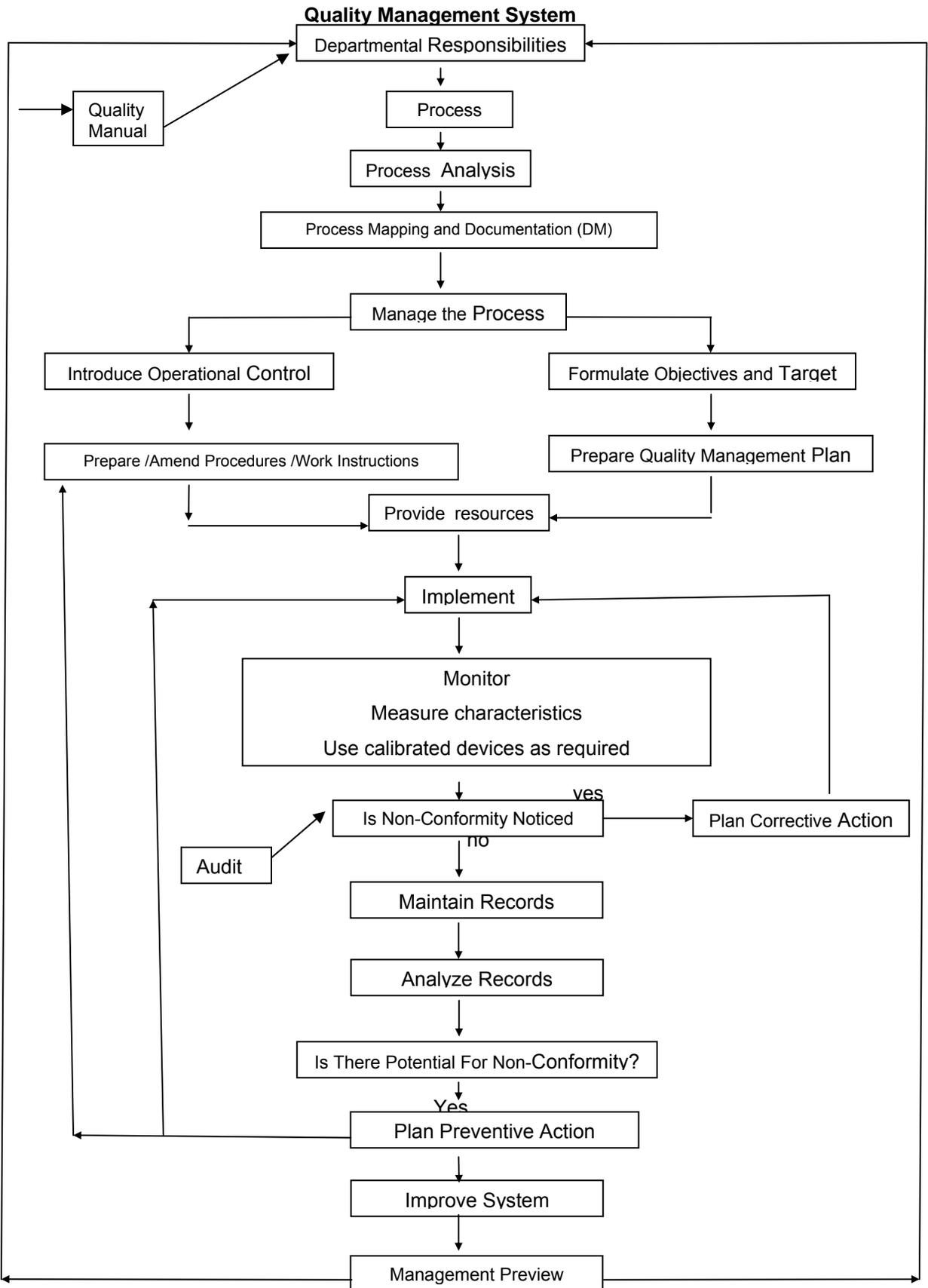http://www.iso.org/iso/iso_catalogue/management_standards/iso_9000_iso_14000/qmp.htm

These principles are not absolutes. They are dynamic and evolve and change during a process. They may be called 'Principles-in-process', as Peter B.Vaill refers to them in his article "The Unspeakable Texture of Process Wisdom" published in organizational *Wisdom and Executive Courage*, Srivastva and Cooperider, New Lexington Press, 1998.

"'Principles-in-process' means the ongoing (temporal) discovery of the meaning of principles, for only in process (that is, over time) do their meanings emerge. It means keeping principles rooted in one's temporal consciousness, not treating them as entities ("unity", the absolute") existing independent of consciousness. For process wisdom, after all, is an attitude and action of persons. Principles exist in a person's processes of relating to the world."

Conclusion

When properly implemented, the ISO 9000 Standard, can engender a striving for quality that benefits the organization and its customers.

See the diagram below for a graphic depiction.

Quality Management System

Departmental Responsibilities

Quality Manual

Process

Process Analysis

Process Mapping and Documentation (DM)

Manage the Process

Introduce Operational Control

Formulate Objectives and Target

Prepare /Amend Procedures /Work Instructions

Prepare Quality Management Plan

Provide resources

Implement

Monitor

Measure characteristics

Use calibrated devices as required

Audit

Is Non-Conformity Noticed

yes

no

Plan Corrective Action

Maintain Records

Analyze Records

Is There Potential For Non-Conformity?

Yes

Plan Preventive Action

Improve System

Management Preview

References

The following references are excellent sources for information on the ISO 9001 Standard.

1.For the history of ISO 9001 standard

http://www.wqntoday.com/whitepapers/HistoryofISO9000andQuality_Improvement.ppt

2.On how to implement the standard.

http://www.iso.org/iso/iso_9000_selection_and_use-2009.pdf

3.On understanding the basics:

http://www.iso.org/iso/iso_catalogue/management_standards/understand_the_basics.htm

4.For a different view by the Audit Group:

http://isotc.iso.org/livelink/livelink/3553584/APG-
Effectiveness.ppt?func=doc.Fetch&nodeid=3553584#263,1