2) Quality Administration

Quality (philosophy)

Background

Aristotle analyzed qualities in his logical work, the Categories. To him, qualities are hylomorphically–formal attributes, such as "white" or "grammatical". Categories of state, such as "shod" and "armed" are also non–essential qualities (katà symbebekós). Aristotle observed: "one and the selfsame substance, while retaining its identity, is yet capable of admitting contrary qualities. The same individual person is at one time white, at another black, at one time warm, at another cold, at one time good, at another bad. This capacity is found nowhere else... it is the peculiar mark of substance that it should be capable of admitting contrary qualities; for it is by itself changing that it does so". Aristotle described four types of qualitative opposites: correlatives, contraries, privatives and positives.

John Locke presented a distinction between primary and secondary qualities in An Essay Concerning Human Understanding. For Locke, a quality is an idea of a sensation or a perception. Locke further asserts that qualities can be divided in two kinds: primary and secondary qualities. Primary qualities are intrinsic to an object— a thing or a person—whereas secondary qualities are dependent on the interpretation of the subjective mode and the context of appearance. For example, a shadow is a secondary quality. It requires a certain lighting to be applied to an object. For another example, consider the mass of an object. Weight is a secondary quality since, as a measurement of gravitational force, it varies depending on the distance to, and mass of, very massive objects like the Earth, as described by Newton's law. It could be thought that mass is intrinsic to an object, and thus a primary quality. In the context of relativity, the idea of mass quantifying an amount of matter requires caution. The relativistic mass varies for variously traveling observers; then there is the idea of rest mass or invariant mass (the magnitude of the energy-momentum 4-vector), basically a system's relativistic mass in its own rest frame of reference. (Note, however, that Aristotle drew a distinction between qualification and quantification; a thing's quality can vary in degree).Only an isolated system's invariant mass in relativity is the same as observed in variously traveling observers' rest frames, and conserved in reactions; moreover, a system's heat, including the energy of its massless particles such as photons, contributes to the system's invariant mass (indeed, otherwise even an isolated system's invariant mass would not be conserved in reactions); even a

cloud of photons traveling in different directions has, as a whole, a rest frame and a rest energy equivalent to invariant mass.Thus, to treat rest mass (and by that stroke, rest energy) as an intrinsic quality distinctive of physical matter raises the question of what is to count as physical matter. Little of the invariant mass of a hadron (for example a proton or a neutron) consists in the invariant masses of its component quarks (in a proton, around 1%) apart from their gluon particle fields; most of it consists in the quantum chromodynamics binding energy of the (massless) gluons (see Quark#Mass).

Conceptions of Quality as Metaphysical and Ontological

Philosophy and common sense tend to see qualities as related either to subjective feelings or to objective facts. The qualities of something depends on the criteria being applied to and, from a neutral point of view, do not determine its value (the philosophical value as well as economic value). Subjectively, something might be good because it is useful, because it is beautiful, or simply because it exists. Determining or finding qualities therefore involves understanding what is useful, what is beautiful and what exists. Commonly, quality can mean degree of excellence, as in, "a quality product" or "work of average quality". It can also refer to a property of something such as "the addictive quality of nicotine". In his book, Zen and the Art of Motorcycle Maintenance, Robert M. Pirsig examines concepts of quality in classical and romantic, seeking a Metaphysics of Quality and a reconciliation of those views in terms of non-dualistic holism.

2.1 Quality Management Concept

A **quality management system** (QMS) can be expressed as the organizational structure, procedures, processes and resources needed to implement quality management. Early systems emphasized predictable outcomes of an industrial product production line, using simple statistics and random sampling. By the 20th century, labor inputs were typically the most costly inputs in most industrialized societies, so focus shifted to team cooperation and dynamics, especially the early signaling of problems via a continuous improvement cycle. In the 21st century, QMS has tended to converge with sustainability and transparency initiatives, as both investor and customer satisfaction and perceived quality is increasingly tied to these factors. Of all QMS regimes, the ISO 9000 family of standards is probably the most widely implemented worldwide - the ISO 19011 audit regime applies to both, and deals with quality and sustainability and their integration.

2.2 Philosophy

The basis for TQM is to prevent defect or trouble with the Quality from the beginning. Applying statistical techniques and management skills to examine and supervise factors that may affect on the appearance of defects during the whole process, in research phase, design phase, supply phase and in other services relating to the development of Quality.

Applying TQM will not only improve the product quality but also enhance the effectiveness of the whole system due to the principle "always do correctly the correct works at the very beginning".

According to ISO 9000, Total Quality Management is a management philosophy that seeks to focus the functions of an organization into Quality, with the participation of every member in it, in order to reach a long-lasting success by satisfying all customer requirements and bring back benefit to the members of that organization and to the society.

Management system in TQM is a system established on basis of the following philosophies:

(1) Quality can't be assured and controlled if only the output of the process is controlled. It is the whole process involving every function, every operation that create quality.

(2) The responsibility towards Quality belongs to the highest level management of the organization. To have an appropriate and effective Quality Policy, the management board must deeply change their belief in approach to improve quality. They need to make commitment and agreement to Quality activities. This is very important step in the management of quality in any organization. If you want to improve the quality, first, you have to improve the administrative operations and other supporting functions.

(3) The quality of the product depends much on the quality of Human factor, the most important factor in making product quality. Training, education must be the strategic tasks to be firstly focused in the quality improvement programs.

(4) Quality must have the attention from all the members in the organization. Therefore, Quality control system must be built upon the mutual understanding, coherence and commitment to the main goal which is the quality of the work. This

will help facilitate the movements of Quality groups in the organization, which will draw people into creativity and improvement of quality activities.

(5) Toward the prevention and protection from defect, error in the production process and other operations by making best use of statistical tools to find the main causes of defect and take duly corrective actions.

(6) To avoid economic costs, these principles must be absolutely and correctly followed right at the beginning.

TQM is related directly to every production and business processes to control and prevent defect causes during the process, with the procedure to implement as follows:

1. Select process of priority to analyze
2. Analyze the process
3. Examine the process
o Target norms/ control board
o Relations with customers/suppliers
o Service contract with customers/suppliers
4. Quality Improvement method in the process

Actually, TQM is the synchronous combination of Quality Control with Productivity control for the main goal as to reach to the perfection of the product, as well as the perfection of the company itself.

2.3 Management of Human Resources

Human resource management is the management of an organization's workforce, or human resources. It is responsible for the attraction, selection, training, assessment, and rewarding of employees, while also overseeing organizational leadership and culture and ensuring compliance with employment and labor laws. In circumstances where employees desire and are legally authorized to hold a collective bargaining agreement, HR will also serve as the company's primary liaison with the employees' representatives (usually a labor union).

HR is a product of the human relations movement of the early 20th century, when researchers began documenting ways of creating business value through the strategic management of the workforce. The function was initially dominated by transactional

work, such as payroll and benefits administration, but due to globalization, company consolidation, technological advancement, and further research, HR now focuses on strategic initiatives like mergers and acquisitions, talent management, succession planning, industrial and labor relations, and diversity and inclusion.

In startup companies, HR's duties may be performed by trained professionals. In larger companies, an entire functional group is typically dedicated to the discipline, with staff specializing in various HR tasks and functional leadership engaging in strategic decision making across the business. To train practitioners for the profession, institutions of higher education, professional associations, and companies themselves have created programs of study dedicated explicitly to the duties of the function. Academic and practitioner organizations likewise seek to engage and further the field of HR, as evidenced by several field-specific publications.

2.4 Tools for Managing quality processes

A QMS process is an element of an organizational QMS. The ISO9001:2000 standard requires organizations seeking compliance or certification to define the processes which form the QMS and the sequence and interaction of these processes. Butterworth-Heinemann and other publishers have offered several books which provide step-by-step guides to whom seeking the quality certifications of their products Examples of such processes include:

- Order Processing
- Production Planning
- Measurement of product/ service/ process compliant with specified requirements including statistical techniques such as Statistical Process Control and Measurement Systems Analysis
- Calibration
- Internal Audit
- Corrective Action
- Preventive Action
- Identification, labelling and control of non conforming product to preclude its inadvertent use, delivery or processing.
- Purchasing and related processes such as supplier selection and monitoring

ISO9001 requires that the performance of these processes be measured, analyzed and continually improved, and the results of this form an input into the management review process.