

MANAGEMENT

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DEVELOPMENT OF QUALITY MANAGEMENT SYSTEMS ‘QMS’ TOWARDS TOTAL QUALITY MANAGEMENT ‘TQM’ BASED ON PROJECT MANAGEMENT ‘PM’ FRAMEWORK

In project management, quality management (QM) means developing and following processes and procedures to ensure that a project satisfies the specified needs of the customer. Planning, scoping, execution and control in all stages of the project. Therefore; QM requires the opportunity to shape and organise a team of individuals in cost effective and time span to reach a qualitative target, which would result in the development of a good quality. This target requires choosing the specifications, the appropriate systems, and procedures to ensure that quality is well implemented in all stages of the project [1]. There are several quality management systems (QMS) applications, such as the European Foundation for Quality Management (EFQM model), the International Organization for Standardization (ISO standards), Malcolm Baldrige, and Six Sigma. Following, is to introduce new practices, where Total Quality Management (TQM) became widely used among them [2]. TQM is an approach that involve the participation of all employees in the organisation to reach a high level of quality at all stages of its project’s life cycle from the stage of initiating, planning, executing, and controlling to completion. Therefore, TQM system can become a vital tool for continuous improvement for any project based enterprises [3]. A Project Management (PM) approach to Total

Quality Management (TQM) is the optimal vehicle for executing a systematic quality assurance initiative due to its multidisciplinary nature. When it is intended, TQM will have the potential to grow and be adopted into all levels of an enterprise [4]. In tandem with project management ideas, the Total Quality Management approach can be carried out in some simple steps, including cause-effect analysis and statistical data techniques those used to identify the problem. TQM contains quality functions and stockholders coordination such as customers and suppliers, taking in consideration external influences of political, environmental, and cultural aspects. TQM considered as a project management technique that works under the aspect of project quality management where the phases of planning, executing, monitoring and controlling. The quality plan can be enclosed inside project plan where project processes must be ensured. In this case project management has a view of implementing quality management tools and techniques such as Quality Function Deployment and Cause-Effect diagrams. Such tools and techniques can help to understand the ongoing state of process identify the proper approach within all sectors of management. Another element is the quality assurance which include activities those leading to providing all necessary standards of quality for the project. An essential inspection operation called the quality audits; that concerned to the activities of quality management will take place. Inspection is the basic technique of quality control also. This process of quality control is a technical method to test and check the validity of the products and the management outputs with the standard limits. A basic elements of Stages of TQM evolution [5], would be reflected by the developmental progression of TQM through inspection, quality control, quality assurance and Total Quality Management. Briefly, during project management life-cycle or stages there are some functions to be executed before closing and delivering any project which among them is to ensure the quality of the process, product, or even the whole of the project. Quality management systems have been adopted to achieve this target where levels of quality are frequently developed to reach the most recent application TQM. These levels toward TQM evolution; Inspection: measure the qualities of an item and contrast them with its specifications, Quality Control: monitoring process performed with an input circle to the production line, Quality

Assurance: a set of implemented procedures in quality which are structured entirely to ensure that no zero defect, and Total Quality Management: concerned on quality and dependent on the support of each one to accomplish consumer satisfaction and organisational improvement.

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