International Journal of Advance Research in Science and Engineering
Vol. No.4, Issue 11, November 2015
www.ijarse.com
IJARSE
ISSN 2319 - 8354

APPLYING COSTOF QUALITY FOR ITIL- AN ILLUSTRATIVE STUDY

Dananjay Anand Pushkala[1], Dr.S.Sridhar [2] , An.P.Sriharsha[3]

[1]*Research Scholar, Shri Venkateshwara University, Gajrula. UP (India)*

[2]*Director & Dean, R.V.College of Engineering Bangalore (India)*

[3]*Student MS (CS), Uni. of South California , Los Angeles*

ABSTRACT

When the goal of an organization is to improve the way a business is run,it's so important that business's IT becomes cost optimized and healthy, the Cost of Quality (CoQ) is a key& well accepted approach for achieving that kind of improvement. Their relevance in determining the quality of product/software solution and services has been understood only recent years, mostly in the context of the costswhich is incurred as a result of delivering poor quality product/software& services. The main idea behind a CoQ approach is to increase revenue and decrease operational cost by reducing rework and maximizing improvement opportunities.

Keywords: Cost of Quality (CoQ) , CoQ Baselining and Indexing, Software Solution, Service Design, Service Transition, COQITIL, CoQ in ITServices

I. INTRODUCTION

In the field of total quality management, confusion was raised worldwide with the TQM concept and the effects of TQM implementation. In fact, much research dealing with the concept of TQM has been conducted. Different researchers have adopted different definitions of TQM. Concerning the effects of TQM implementation, different researchers have different findings. A number of researchers concluded that TQM implementation has effects on firms' operational performance leading to organizational performance eventually, whereas others stated that it does not lead to improvements in firms' organizational performance. Conflicting research findings have thus been reported surrounding the effects of TQM implementation.

Similarly, conflicting results concerning the effects of TQM implementation on firms' business performance were also found in Indian manufacturing and service sector. After the literature related to TQM implementation in Indian manufacturing and service sector was studied, it became evident that no large-scale empirical research dealing with the effects of TQM implementation on firms' overall organizational performance had been systematically conducted. In addition, no research has been conducted for developing a TQM implementation model that can be used by Indian manufacturing and service sector to improve their TQM implementation efforts. However this study is confined to service sector and that too IT sector. The lack of sufficient guidelines to assist firms' TQM implementation has led to a number of unsuccessful TQM implementations in India.

To gain transparency and control over expenses and investments; all IT roles, activities, solutions, services and quality have come under the purview of business executives and are being assessed for the extent to which they create (business) value i.e., help the organization in achieving objectives. It is, therefore, not surprising that the impact of services is increasingly being measured in terms of business criteria such as Productivity Benefit, Return on Quality (RoQ) and Return on Investment (RoI).

When the goal of an organization is to improve the way a business is run so that IT becomes cost optimized and healthy, so the Cost of Quality (CoQ) is a key approach for achieving that kind of improvement. Their relevance in determining the quality of product/software solution and services has been understood only recent years, mostly is the context of the costs is incurred as a result of delivering poor quality product/software& services. The main idea behind a CoQ approach is to increase revenue and decrease operational cost by reducing rework and maximizing improvement opportunities.

II. PURPOSE

The purpose of this paper is to develop a best practice framework to adopt CoQ practices in ITIL and detail the CoQITIL framework that apply and employ the CoQ principles to all types of service organization and for all types of services. Some of the main issues this whitepaper will address on how to,

- Achieving business objectives
- Greater returns on the quality
- Justification for investment in the improvement and assessment of failures
- Ability to set cost-reduction targets and then to measure and report progress
- Ability to cost and compare performance across all functions, team, service lines, product lines and activities
- Ability to identify improvement programs for quick wins/short terms benefits, medium term benefits and long term benefits for investment rationalization
- Enable decisions about quality to be made in an objective and systematic manner
- Ability to set quality targets and a mean to measure & control the sustenance of the target
- Promoting a company-wide quality improvement culture

III. COQITIL AND ITS RELEVANCE

CoQITIL is framework to woven CoQ principles with ITIL. CoQITIL is a comprehensive framework which acts as an enabler in end to end CoQservice to deliver results in ITSM function. CoQ refers to the cost that companies undertake to rectify the mistake they made and have to correct it. By the same token CoQ refers to the cost companies incur to ensure that the software solutions they deliver to their clients are free of defects similarly CoQITIL will refer to the cost companies incur to ensure services they deliver to their clients are satisfied. To achieve that goal, companies need to incur costs, 'invest', in the form of resources, tools and activities throughout the lifecycle of service to identify and prevent complaints/dissatisfaction as well as potential failures.

IV. WHAT ARE "QUALITY COSTS"?

The effort expensed during operation and maintenance of a system, product or software, on design, implementation, operation and maintenance on a quality management system, on resources committed for continuous improvement, effort incurred due to rework/fix on system, product & service failures and of all other necessary effort& non-value added activities required to achieve a quality product, solution or service. These effort expensed are associated with the cost incurred for the performing the activities as stated above.

V. TYPES OF "QUALITY COSTS"

5.1 Cost of Failure

In Service Management, this is seen in the Incident Management Process. (Every Incident is a failure of one kind or another.) Reactive Problem Management would also be included. In addition, we have the Business Relationship Management efforts to restore customer trust, and the Service Level Management efforts to report on service failures. To add to the failure cost we must include the fact that almost every failure has costs to a customer and user.

5.2 Cost of Assessment

In Service Management, a variety of assessment activities go on during Service Design and Service Transition. In Service Design, assessment of every change should be done thru the Availability, Capacity, Continuity and Security processes. Service Transition includes Change Evaluation (to head of issues), Service Validation and Testing (purely assessment).

5.3 Cost of Improvement

In Service Management this has three tracks. The obvious one is in CSI, where quality improvement is the whole point! The second is the Proactive Problem Management can also be termed as Quality Improvement and the third is in Service Strategy processes which also have a Quality Improvement angle (when they operate as they should). And when an improvement has been identified (via CSI, Problem Management or Service Strategy), it must be implemented (Service Design) and deployed (Service Transition).

VI. COQITIL FRAMEWORK

This section will illustrate the CoQITIL service framework. This will detail out the identification of the Goals, Phases (Roadmap), Cost Type Mapping by Activity Area, AS-IS &TO-BE cost visualization, Solution Development, Implementation and Realization. CoQITIL framework is all about Cost Visualization for a service during in the pre or post transition phase. It is most helpful in determining the structure of cost across the lifecycle of service.

Using CoQITIL framework in wider sense the organization can achieve these goals;

- Increase Process Efficiency
- Lower Cost of Quality
- Harmonize Processes under a single Quality Management System

International Journal of Advance Research in Science and Engineering
Vol. No.4, Issue 11, November 2015
www.ijarse.com
IJARSE
ISSN 2319 - 8354

VII. COQITIL FRAMEWORK METHODOLOGY

This section will illustrate the execution methodology of the CoQITIL Framework. Methodology is phase driven as illustrated in the Figure 1.

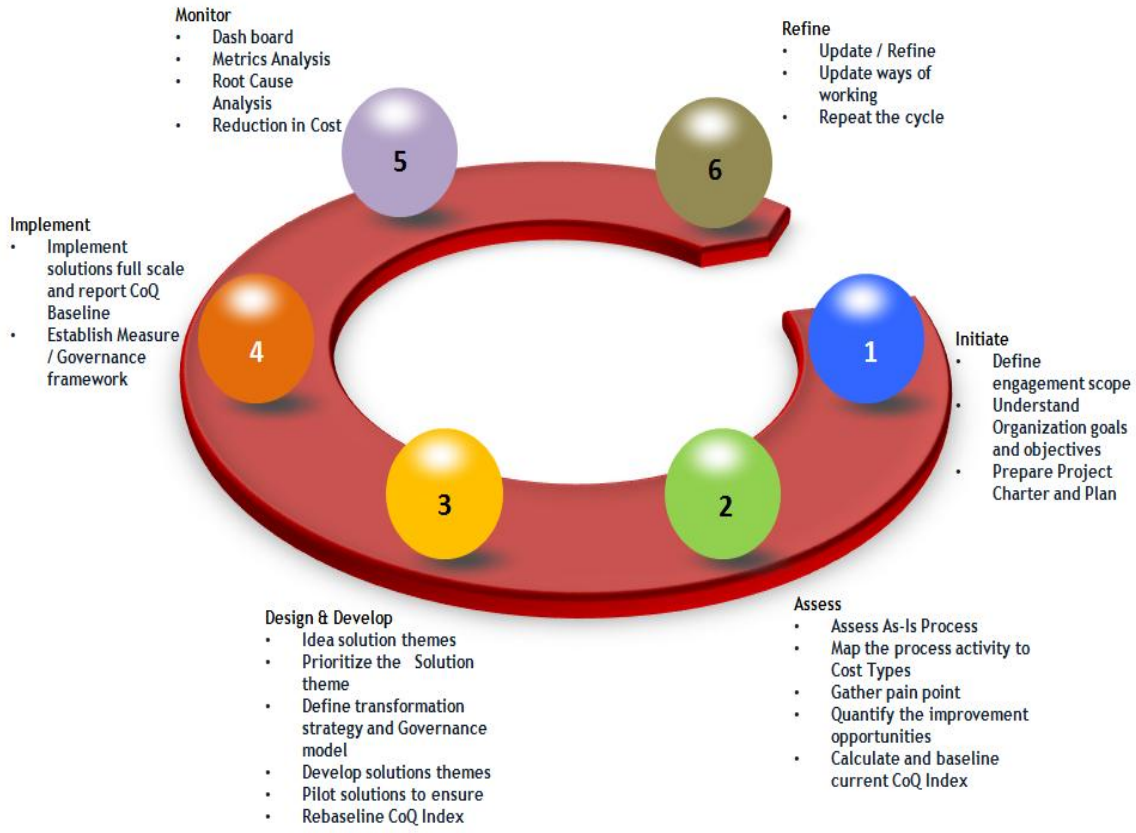


Figure 1

7.1 Phase: Initiate

The Initiate phase will involve initiating the engagement by reviewing and finalizing scope. Typical key activities to be performed during this phase will include:

- ✧ Conduct Kickoff presentation
- ✧ Identify key Stakeholders
- ✧ Understand Organization Objectives and Goals
- ✧ Determine Scope
- ✧ Prepare Engagement Plan and Project Charter

7.2 Phase: Assess

The Assess Phase will primarily engage the project team in discovering & understanding the processes. This will enable understanding of the current state of processes, cost maps to process activities, roles & responsibilities, the control mechanism and their measures. Typical key activities to be performed during this phase will include:

- ✧ Plan and prepare for the current state analysis
- ✧ Determine the Cost types to activity maps (Refer Table 1& 2 for Cost types maps illustration)
- ✧ Identify and Quantify opportunities of improvement.
- ✧ Calculate and Baseline Current CoQ index (Refer Section 4.2 for CoQ Indexing)
- ✧ Prepare current state assessment report.

Table1: Cost type map to Area (Illustration)

Area	Improvement	Assessment	Failure
Availability Management	✓	✓	✓
Capacity Management	✓	✓	✓
Event Management	✓	✓	✓
Incident Management			✓
Problem Management	✓	✓	✓
Change Management	✓	✓	✓
Release Management	✓		
Configuration Management	✓	✓	✓
Service Testing		✓	✓

Table2: Cost type map to Activity (Illustration)

Incident Management Activity Area	Improvement	Assessment	Failure
Incident Detection			✓
Record Detection			✓
Investigation &Diagnose			✓
Implement Fix			✓
Closure			✓

7.3 Phase: Design & Develop

The Design & Develop phase will concentrate on closing the gaps that have been identified and to Design the Target state operations and process maps for each process ensuring that the processes align to with business requirements. This phase will address the design of processes from ITIL perspective and build of the same. This phase will also involve preparation of the training plan, training material, pilot plan, etc.

Typical key activities to be performed during this phase will include:

- ✧ Causal analysis (5Why)
- ✧ Brainstorm to identify solutions
- ✧ Recommendation on target state options/solutions
- ✧ Develop solutions

- ✧ Prepare Work Plan
- ✧ Identify Measure framework & KPIs relevant for CoQ reporting and monitoring
- ✧ Pilot solutions
- ✧ Monitor and report results
- ✧ Recalculate and Baseline the piloted/achievable CoQ index (Refer Section 4.2 for CoQ Indexing)

7.4 Phase: Implement

The Implement phase will focus on implementing the newly designed solution, refining/updating the processes wherever necessary. This phase will also involve imparting training to the Team members, Process owners and other relevant staff.

Typical key activities to be performed during this phase will include:

- ✧ Plan for Implementation
- ✧ Set up deployment team
- ✧ Execute Implementation
- ✧ Refine/update process documentation
- ✧ Deliver Training
- ✧ Baseline & Report achieved CoQ index (Refer Section 4.2 for CoQ Indexing)
- ✧ Establish governance framework

7.5 Phase: Monitor

The Monitor phase will focus on institutionalization of the processes and CoQ indexes. Process audits will be conducted and Key Performance Indicators for each process will be reviewed to ensure that the achieved CoQ reduction is sustained and this will be integrated as an ongoing part of service improvement.

Typical key activities to be performed during this phase will include:

- ✧ Track and report progress
- ✧ Measure Value Delivered as per the roadmap
- ✧ Prepare and conduct audit programme
- ✧ Prepare post implementation report
- ✧ Deliver reduction in CoQ

7.6 Phase: Refine

The Refine phase will focus on refining/updating the approach and on continued maturation of CoQ reduction. This may also include replication and repetition of improvement at different areas of Business with the organization.

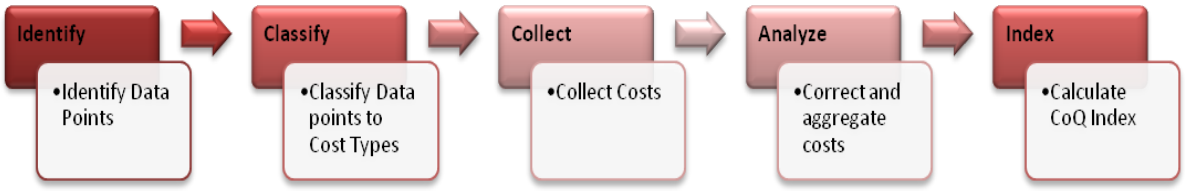
Typical key activities to be performed during this phase will include:

- ✧ Update / Refine process or operations
- ✧ Update ways of working
- ✧ Repeat the cycle

International Journal of Advance Research in Science and Engineering
Vol. No.4, Issue 11, November 2015
www.ijarse.com
IJARSE
ISSN 2319 - 8354

VIII. COQ BASELINING AND INDEXING

CoQbaseling and indexing is an independent process. A typical CoQbaselining is a Five Step approach as illustrated below.



Activity Collect, Analyze and Index are iterative process which may repeat at different times. Indexing will result the CoQ exercise to a meaningful output to the business. Through indexing an organization would arrive at following cost and quality assessment of service management practices. The result would allow Business to identify areas that require attention in order to reduce cost and improve service quality. Illustration of the CoQ Outcome is listed below.

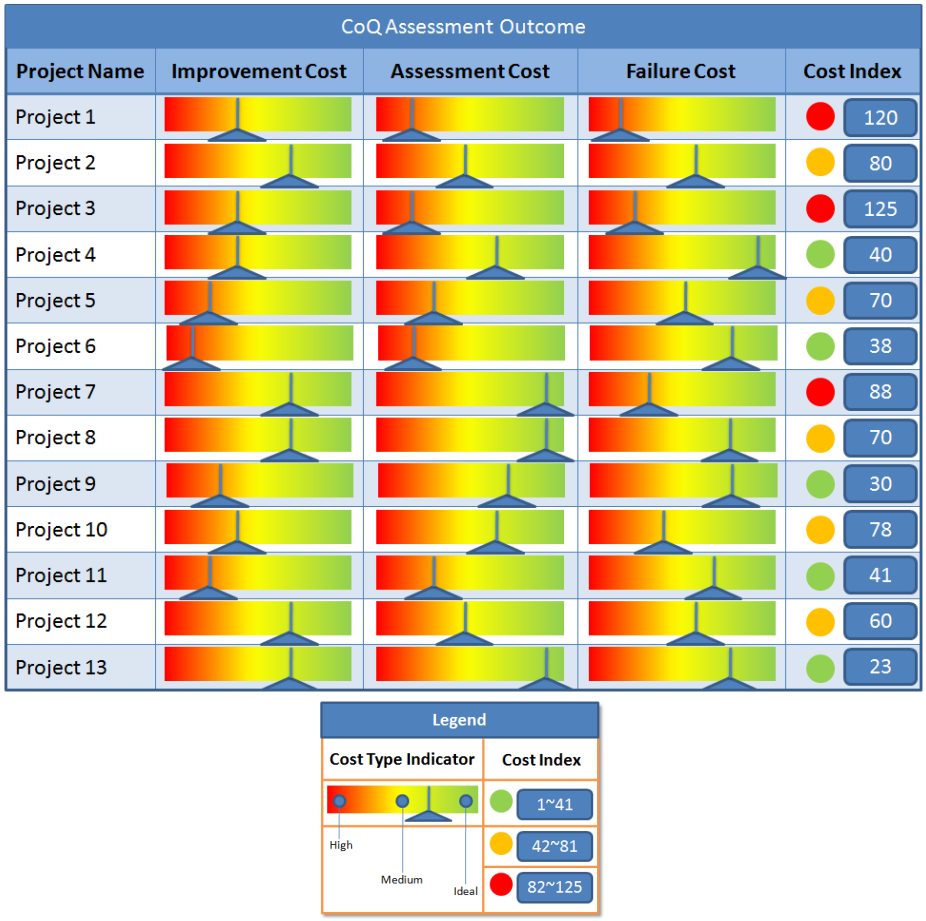


Figure 2

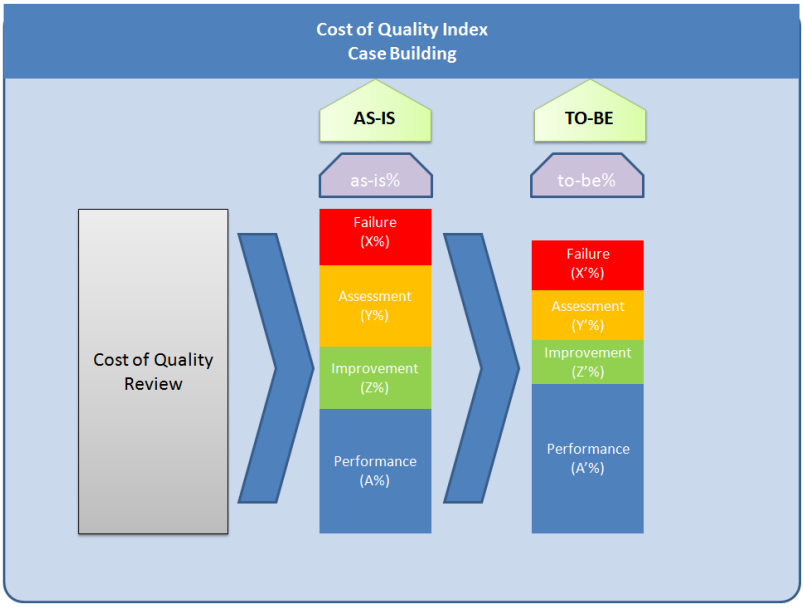


Figure 3

IX. CONCLUSION

The issue of quality is always an important aspect in any sector or industry. This is because of the fact that quality, particularly in the service sector is the vital factors which connect the customers to a specific company. The quality of service being offered by a specific company motivates customer satisfaction, loyalty and retention, which are vital in the marketing and management aspect**.**Cost of quality is the "Language of cost" between the operations and business. This term is widely misunderstood, Cost of Quality is methodology that enables business, management, clients, users, operations and quality functional personnel to visualize the issues, quality and effort. CoQITIL framework would simplify and complement well with the service lifecycle. The CoQITIL isn't the cost of delivering a quality service but it's the cost of NOT delivering quality service.

REFERENCES

[1]. August, A., Krishnan, S. K. and Kadir, S. L. S. A. (2002). 'The structural impact of TQM on financial performance relative to competitors through customer satisfaction: A study of Malaysian manufacturing companies'. Total Quality Management. 808 – 820.

[2]. Chase, R. B. and Bowen, D. E. (1991). 'Service quality and the service delivery system – a diagnostic framework'. In S. W. Brown, E. Gummesson,, B. Edvartsson, B. and B. Gustavsson (eds.).System Quality – Multidisciplinary and Multinational Perspectives.New York, NY: Lexington Books.

[3]. Chien, T. K.. Su, C. H. and Su, C. T. (2002). 'Implementation of a customer satisfaction program: A case study'. Industrial Management & Data Systems. 102(5), 252 – 259.

[4]. Commonwealth of Learning. (2000). Manual for Educational MediaResearchers: Knowing your Audience. Vancouver, Canada: Commonwealth Educational Media Centre for Asia (CEMCA).

[5]. Churchill, G. A. and Paul, P. J. (1994). Marketing: Creating value for customer. New York, NY: Irwin.

[6]. Cronin, J. J. and Taylor, S. A. (1992). 'Measuring service quality: A re-examination and extension'. Journal of Marketing. 56(July), 56 – 68.

[7]. Dean, J. W. and Bowen, D. E. (1994). 'Management theory and total quality: Improving research and practice through theory development'.Academy of Management Review, 19(3), 392 – 418.

[8]. Gronroos, C. (1978). 'A service oriented approach to marketing of service'.European Journal of Marketing. 12(8), 588 – 601.

[9]. Hasan, M. and Kerr, R. M. (2003). 'The relationship between total quality management practices and organisational performance in service organizations'. The TQM Magazine. 15(4), 286 – 291.

[10]. Kaynak, H. (2003). 'The relationship between total quality management practices and their effects on firm performance'. Journal of Operational Management. 21, 405 – 435.

[11]. Klaus, P. (1985). 'Quality epiphenmenon: The conceptual understanding of quality in face-to-face service encounters'. In J. Czepiel, M. R. Solomon and C. F. Suprenant (eds). The Service Encounter.Lexington, MA: Lexington Books.

[12]. Mehra, S., Hoffman, J. M. and Sirias, D. (2001). 'TQM as a management strategy for the next millenia'. International Journal of Operations and Production Management. 21(5/6). 855 – 876.

[13]. Mehra, S. and Ranganathan, S. (2008). 'Implementing total quality management with a focus on enhancing customer satisfaction'.International Journal of Quality & Reliability Management. 25(9), 913 – 927.

[14]. Moghaddam, G. G. and Moballeghi, M. (2008). 'Total quality management in library and information sectors'. The Electronic Library. 26(6), 912 – 922.

[15]. Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985). 'A conceptual model of service quality and its implication for future research'.Journal of Marketing. 49(7), 14 – 50.