

## COST OF QUALITY (COQ)

### QUALITY TOOLS

#### Evaluation

##### Description of Cost of Quality

The “cost of quality” – or actually, “the costs of poor quality” are those costs associated with avoiding poor quality or those incurred as a result of poor quality. There are four major categories of costs.

1. Preventions costs – costs associated with reducing the potential for defective parts or services.
2. Appraisal costs – costs related to evaluating products, processes, parts and services.
3. Internal failure costs – costs that result from production of defective parts or services before delivery to customers.
4. External failure costs – costs that occur after delivery of defective parts or services.

##### When to use the Cost of Quality

Philip Crosby stated that quality is free. “What costs money are the unquality things – all the actions that involve not doing it right the first time.” A forward looking company will always use the COQ tools to evaluate the situation, pinpoint the problem area and promote quality improvement; whereas the losers will react to customer complaints, product failures and recalls.

##### How to use the Cost of Quality

There are a number of methods as described and compared in Gary Zimack’s paper “Cost of Quality (COQ): Which Collection System Should Be Used?” As a quality practitioner, we rely on the data provided from accounting, and any additional information as supplied by marketing and operation departments. The data obtained from various sources will be categorized and entered into the template provided here to calculate the impact of COQ as a percentage of Sales, manufacturing costs or other bases.

##### Tips on use of Cost of Quality

The terminology used in electronics is different that of automotive, so each user should collect and accumulate his/her own unique list of COQ. In the template, a number of “universal” terms according to ASQ’s knowledge base are already entered for the convenience of the user and some sample values are entered to illustrate how the template will be used. Enter your values in the cells high-lighted yellow. The calculation will be automatic.

### Application of Cost of Quality

The prime purpose of COQ is to pinpoint the problem area and promote quality improvement and cost reduction. It can be applied

- 1) to help management to evaluate the relative importance of quality problems,
- 2) to aid in budgeting and cost control activities, and
- 3) to serve as a scoreboard to evaluate the organizations success in achieving quality objectives.

### References

ASQ Quality Costs Committee, *Principles of Quality Costs: Principles, Implementation, and Use, Third Edition*, ed. Jack Campanella, ASQ Quality Press, 1999

ASQ, Cost of Quality (COQ): Which Collection System Should Be Used? *Zimack, Gary*