

1.0 Xmultiple “Cost Of Quality” Methods

The Cost of Quality is the sum of the costs of the items listed below. This represents the difference between the actual cost of an Xmultiple product or service and what the reduced cost would be if there were no possibility of substandard service, failure of products or defects in their manufacture. The cost of quality is the price of creating a quality product or service. It's the cost of NOT creating a quality product or service.

Every time work is redone to manufacturer an Xmultiple product, the cost of quality increases. The steps listed below are included in our cost of quality:

- The reworking of a manufactured item.
- The retesting of an assembly.
- The rebuilding of a tool.
- The correction of a bank statement.
- The reworking of a service, such as the reprocessing of a loan operation or the replacement of a food order in a restaurant.

Any cost that would not have been expended if quality were perfect contributes to the cost of quality.

Total Quality Costs

As the figure below shows, quality costs are the total of the cost incurred by:

- Investing in the prevention of nonconformance to requirements.
- Appraising a product or service for conformance to requirements.
- Failing to meet requirements.

Quality Costs—general description

Prevention Costs

The costs of all activities specifically designed to prevent poor quality in products or services.

Failure Costs

The costs resulting from products or services not conforming to requirements or customer/user needs. Failure costs are divided into

Costs of:

- New product review
- Quality planning
- Supplier capability surveys
- Process capability evaluations
- Quality improvement team meetings
- Quality improvement projects
- Quality education and training

Appraisal Costs

The costs associated with measuring, evaluating or auditing products or services to assure conformance to quality standards and performance requirements.

These include the costs of:

- Incoming and source inspection/test of purchased material
- In-process and final inspection/test
- Product, process or service audits
- Calibration of measuring and test equipment
- Associated supplies and materials

internal and external failure categories.

Internal Failure Costs

Failure costs occurring prior to delivery or shipment of the product, or the furnishing of a service, to the customer.

Costs of:

- Scrap
- Rework
- Re-inspection
- Re-testing
- Material review
- Downgrading

External Failure Costs

Failure costs occurring after delivery or shipment of the product — and during or after furnishing of a service — to the customer.

Cost of:

- Processing customer complaints
- Customer returns
- Warranty claims
- Product recalls