The Phantom Factory: Cost of Poor Quality

Description

While quality is popular in theory, it is not always easy to muster support for specific quality initiatives. Upper managers might applaud the idea, but they will sometimes hesitate to sign off on projects that, at first glance, offer less tangible rewards than other proposals.

To "scare up" support for quality initiatives, it helps to couch the proposal in terms that upper management understands: financial results. Even when a quality improvement project will not directly influence sales and/or incoming revenue, the proposal can be focused on the costs of *poor* quality (COPQ) through the use of the "phantom factory."

The concept of the "phantom factory" recognizes every organization as a dual organization. One side of the organization produces goods and services of value to the external customer. The other side produces waste—scrapped materials, inefficient processes that result in rework, damaged products, time and money spent satisfying customer complaints, new products that do not sell because they fail to meet customer needs, and so on.

The costs of housing this "phantom factory" can be accurately estimated through COPQ analysis. These figures can then be presented to upper management as the prospective rewards of instituting a quality initiative. Projects based on ethereal costs generally don't stand a ghost of a chance of gaining approval; proposals that deliver solid, bottom-line numbers have a much better chance of coming to life in an organization.

Learning Points

Quality initiatives must be linked to the strategic plans (business objectives) of an organization. They are not undertaken in a vacuum or by whim, gut instinct, or a hunch that something is wrong. To gain approval, and indeed to set off in the right direction once approval is granted, quality efforts must also be based on real data.

Oftentimes, those data are based not on the benefits of higher quality, but on the existing costs of poor quality. These costs can be viewed as a "phantom factory," which siphons valuable time, money, and resources away from the productive efforts in other parts of the organization, such as marketing, R & D, etc. By analyzing these hidden costs and translating them into monetary terms that demonstrate their drain on an organization, proponents of a quality initiative can gain support and approval.

Discussion Questions

Question: Can you think of memorable and innovative ways to present information demonstrating the existence of a "phantom factory"?

Answer: Responses will vary, but they should focus on charts, graphics, and proposals that precisely spell out the costs associated with poor quality. Oftentimes, these costs are hidden and just need to be revealed (with the aid of data analysis, charts, and graphs) to move an organization to action.

Question: What are the major categories of costs of poor quality?

Answer: There are three major categories of costs of poor quality.

- Appraisal/inspection costs include those costs associated with discovering deficiencies before customers are affected by them. Appraisal/inspection costs make it possible to avoid the more serious cost of failures later in the process. It is far better to detect a defect in a component through

inspection of incoming materials than to face a delay or failure later on. World-class organizations have eliminated receiving/inspection of incoming materials by "partnering" with defect-free suppliers, which prove their quality levels with Statistical Process Control (SPC) coupled with Electronic Document Interchange (EDI) systems.

- Internal failure costs are the costs to replace or discard defective work that the customer does not see directly, although customer service may well be adversely affected in indirect ways.
- External failure costs are the failures that customers see. They are the most expensive to correct (warranty claims, recalls, etc.) and they are costly in other ways as well (liability suits, etc.). Such failures bring on those costs associated with "recovering customers" from their dissatisfaction, such as refunds, replacement of goods/services, concessions, etc. Unless root causes of such external failures are found and eliminated, a loss of customers inevitably results with attendant costs that are of major proportions and extremely difficult to gauge with precision.

Question: What are some examples of appraisal/inspection costs that you have experienced in your own organization?

Answer: Responses will vary but may include examples similar to the following.

- testing appliances before shipping
- reviewing insurance policy before mailing
- inspecting purchased equipment/supplies
- proofreading reports or correspondence
- auditing customer bills prior to sending bill
- testing a locomotive to be certain repairs are made
- computerized testing of high tech components
- field trials of new software before general availability

Question: What are some examples of internal failure costs that you have experienced in your own organization?

Answer: Responses will vary but may include examples similar to the following.

- repainting scratched surface of products
- making up for unplanned computer downtime
- replacing products damaged during packing and shipping
- rewriting part of a proposal
- replacing expensive supplies which have spoiled, e.g., antibiotics in storage past potency expiration date
- reworking deficient products of all types
- working overtime to make up for schedule slippage
- correcting errors in various databases
- lost revenue due to delays, people costs due to delays—e.g., MDs, RNs, and clinicians "ready and waiting" while patients are en route in a flawed hospital transport process
- stocking extra parts or components to replace defective ones
- scrapping products that do not meet specifications

Question: What are some examples of external failure costs that you have experienced in your own organization?

Answer: Responses will vary but may include examples similar to the following.

- satisfying warranty claims
- investigating complaints
- recalling new products due to safety and other defects
- offsetting customer dissatisfaction with a recovery strategy, e.g., free hotel room
- correcting billing errors
- borrowing costs due to defective, unpaid bills
- facing liability suits due to ineffective business processes, e.g., those which ignore product safety rules
- refunds for poor service of all kinds
- processing customer complaints
- expediting late shipments
- replacing or repairing shipper's goods damaged or lost by carrier
- arranging hotel rooms for stranded passengers from a canceled flight
- paying interest or losing discount for late payments
- providing on-site assistance to customer to overcome field problems
- mechanical downtime in high-cost production assembly operations
- overtime costs of fixing errors of all kinds

Question: What are some typical activities associated with poor quality?

Answer: Some key words that often suggest activities associated with poor quality include:

- rework
- redundancies
- adjustment
- complaint
- expedite
- duplicate
- warranty claims
- lawsuits
- return
- indemnify
- receiving inspection
- waste
- correct
- refund
- warranty
- dispose
- "no-show"
- redo
- unused capacity
- non-value-added (NVA)
- contingency inventory and space
- unnecessary simplification
- check
- wait
- penalty
- replace
- fix
- recall
- scrap
- repair