

## Railroad Regrets: Quality Planning

### Description

The costs of poor quality planning can sometimes be felt both immediately and further down the track. Consider the case of a major European railroad system, which this past year transferred responsibility for its comprehensive timetable to a new company.

As an extra service for travelers, the new company decided to include full details of any engineering work that would disrupt the normal schedule. Unfortunately, the company failed to take into account the short-notice changes seemingly inherent to repair work, which rendered many of those details inaccurate.

The process of gathering accurate information was also made more difficult by the break-up of the country's rail system into 25 train-operating companies, each of which had to negotiate slots in the schedule and then supply information for the timetable.

The result of the complicated data-gathering process was an original timetable of 2,100 pages, nearly half of which contained at least one error or omission. To rectify the errors in the original book, the new timetable publishers hastily put out a supplement, one that was itself so riddled with errors that a second, 246-page supplement was again printed posthaste. It, too, contained errors of omission and commission numerous enough to warrant a third corrective supplement.

While the company's desire to provide its customers with as much detail as possible is to be commended, as is its interest in correcting errors as quickly as possible, the company obviously didn't learn from its initial mistakes. Its process for gathering information was out of control, and the company and its customers would have been much better served by committing enough time to the project to allow for accurate verification of information. After all, if a project is worth doing, it's worth doing right.

### Learning Points

Without a clear vision or a solid quality planning process to support it, an organization can only hope to create a quality product or service. By failing to engage in quality planning (which would have created a process that allowed enough time to gather accurate information and produce a reliable railroad schedule), the new publishers of the timetable doomed their product to failure. Then, by failing to address the lack of control in the process in its attempt to rectify the errors, the company compounded its original mistakes and lost even more time, money, and public standing without fixing the problem. These are some of the costs of poor quality inherent in poor quality planning.

A mega-planning project can be time-consuming, costly, and exhausting. Therefore, organizations are relying more and more on implementing a quality planning process. The focus is on shortening development cycle time, cutting development costs, and, **most of all**, ensuring that the final result meets the needs of the customer.

### Discussion Questions

**Question:** How could a structured quality planning process help your organization provide superior products and services?

**Answer:** Quality planning helps to:

- identify the customers of the new good or service
- develop the good or service that will meet those needs most effectively

- develop a process that can deliver the good or service as it was designed, both effectively (with fewest deficiencies) and efficiently (with optimum resource consumption)
- develop process controls that will maintain the designed-in quality
- transfer the process and its controls to those who will operate it on a routine basis

**Question:** What are the benefits of providing a product or service that meets *all* of your customers' expectations?

**Answer:** Customer loyalty results in increased revenue and market share achieved by building repeat sales and attracting more business from delighted customer referrals. Customer loyalty also results in shrinking costs since loyal customers will return repeatedly on their own. For these customers, advertising and marketing costs are minimal or are not incurred at all. The costs of acquiring and servicing new customers and replacing old, disloyal customers are not incurred.

Another related benefit from customer loyalty is employee retention because job satisfaction increases. This retention has a direct, positive impact on the bottom line: Retention improves productivity and avoids the costs of hiring and training new employees. All of these decreased costs contribute handsomely to the organization's profitability.

This *does not* mean that each and every good or service has to meet *all* the needs of all of the customers. Many companies have very successfully stratified the market and provided customers with exactly the features and quality dimensions those customers needed without having to pay for many things those customers did not need.

**Question:** Why do quality deficiencies exist in our products or services in the first place?

**Answer:** Many times, we do not do an adequate job in understanding our customers' needs and then translating those needs into the product or service we develop. In these instances, quality deficiencies or the wrong features are designed right into the particular product or service. In other cases, the capability of the production process itself fails to deliver the product specified.

**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.
- 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.

**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
- inspecting purchased equipment/supplies
- proofreading reports or correspondence
- auditing customer bills prior to sending bill
- 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.

- making up for unplanned computer downtime
- replacing products damaged during packing and shipping
- reworking deficient products of all types
- working overtime to make up for schedule slippage
- 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
- 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 and rectifying customer complaints
- correcting billing errors
- borrowing costs due to defective, unpaid bills
- refunds for poor service of all kinds
- expediting late shipments
- 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

**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
- unused capacity
- waste
- correct
- refund
- warranty
- dispose
- “no-show”
- redo
- repair
- check
- wait
- penalty
- replace
- fix
- recall
- scrap
- return