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## COPQ: The Truth Behind the Hidden Plant

### Summary

That quality is a prerequisite and is no longer a differentiator in today's intensely competitive business climate, is well known. However, what is not as clearly known is the fact that the cost of poor quality (COPQ) is substantial. COPQ cannot be mapped by current accounting practices and hence remains hidden. Reducing the COPQ can potentially unlock huge value, but it must be driven by the leaders. By addressing COPQ, companies can look to adding 10-15% of the total costs to the bottom line without any capital investment.

### The Hidden Plant

The concept of quality has come a long way from being a buzzword to a practice that is ingrained in every aspect of a company's work. Quality not only impacts the nature of products (goods and services) produced, but also governs how much is spent on producing them. In fact, world-class companies have realised that quality begins and ends with the profit and loss account and the balance sheet. Yet, the scope to improve quality and simultaneously reduce costs remains one of the greatest opportunities in creating value.

Companies typically suffer from huge hidden plants, which manifest as the cost of poor quality. By halving this cost, the companies can double their profits without making any capital investments!

One of the key reasons for this locked up potential is the functional expertise-driven and department based structure of companies resulting in multiple but isolated silos of quality excellence. However, this structure is at odds with the overall core processes aimed at delivering quality products to the customers consistently. Each core process must orchestrate the output of various departments in order to meet customer expectations while ensuring uniformity of quality every single time.

On the other hand, achieving customer satisfaction remains a moving target given a plethora of alternatives available in the marketplace. In such a situation, the only way out for companies is to look beyond the quality control issues and proactively challenge their quality standards. They must evaluate quality in financial terms and apply the norms of financial prudence to quality management. Companies must understand the strategic importance of cost of poor quality and take remedial steps. And the leaders must drive the initiative.

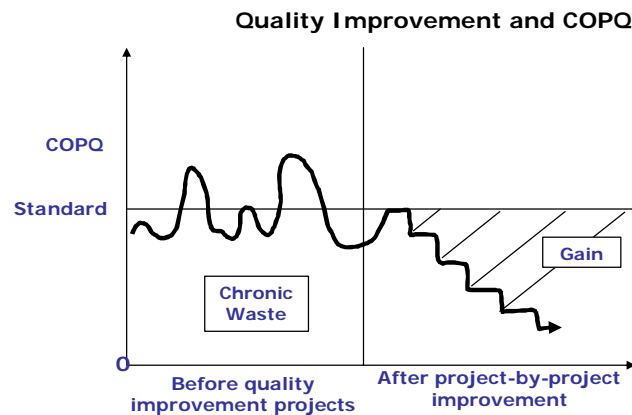


## Limitations of Quality Control

The current quality planning strategies assume certain proportion of defects in the production output and plan for that by benchmarking against industry standards. In addition, the variations around the standards have a higher bandwidth of tolerance. Quality control through appraisal is more reactionary than preventive and aims at enforcing conformance to the standard. Typically, it is an 'after the fact' attempt to find out what went wrong, which makes the discovery and correction of errors an extremely expensive proposition. Moreover, quality control measures do not rectify the standard itself.

## Understanding Cost of Poor Quality

The sheer size of internal failure costs, external failure costs and appraisal costs indicate that cost of poor quality (or chronic waste) does not exist as a homogenous mass. Instead, they occur in specific segments, each traceable to a specific cause(s). These segments are unequal in size and a relative few account for a bulk of the costs. Ironically, these costs seldom show in traditional accounting reports. However, quality-related costs are much larger than are commonly understood. For most companies, these costs run in the range of 20 to 30% of sales or 25 to 40% of operating expenses.



Quality costs are not simply the result of factory operations. The support operations including maintenance, human resources and so on, are also major contributors. The bulk of these costs are the result of incapable support processes. Such costs are buried in the standards, but are in fact avoidable. The problem is that while these costs are avoidable, there has been no clear responsibility for action to reduce them. Fortunately, today there are structural approaches for doing so.

## Reducing COPQ

As with any quality improvement exercise, the journey to reducing COPQ should begin by sizing up the enormity of the challenge. Data collection on COPQ, analysis, and planning of an improvement strategy that attack chunks of the glacier rather than ice chips, remains the recommended process for reducing COPQ. A major by-product of COPQ evaluation is the identification of those vital few segments, which contribute most to COPQ. This results in setting priorities for the effective use of resources. Depending upon the case, either a complete overhaul of the existing core/support processes or an incremental project-by-project maybe adopted. However, in both cases, the following steps may prove beneficial in diagnostic as well as remedial exercises.

### Quality: Steps for Quality Improvement and COPQ Reduction

Diagnosis	Remedial Action
Pareto analysis of symptoms	Consider and propose remedies
Theorize on causes of symptoms	Test remedy
Test theories	Action to institute remedy
Narrow list of theories	Control at a new level
Conduct experiments to establish proof of cause	Continuously measure the effectiveness

## Return on Quality (RoQ)

Every quality improvement exercise requires an investment of resources, which in turn, must be justified by the dramatic improvement in the return on quality (RoQ) investments. Successful COPQ exercises result in reduced cost of errors, improved process capability, reduced customer defections, increase in new customers, and so on. Considering the size and range of the benefits, the investment required may include diagnosis and other forms of analysis, training, redesign or products and processes, testing and experimentation, and equipment. Surprisingly, many improvement projects require little or no costly equipment or facilities. The investment is mainly in the analytical work.

The concept of minimising cost of poor quality aims at preventing the failure costs and minimizes the appraisal costs. It represents a way forward to creating processes with a 'defect free' philosophy.

## Role of Leadership

Considering the fact that COPQ can hide nearly one-third of a plant, the mission assumes strategic importance. Hence, executive ownership and top-down approach to COPQ elimination is warranted. At companies like Jamshedpur-based Tata Steel and Indonesia-based PT Elegant Textile Industry, the top leadership went after COPQ with an evangelical zeal and achieved great success. Interestingly, both are into commodity and highly cyclical businesses -- steel and spun yarn/textiles respectively -- and managed to hold or strengthen their market leadership positions during downturns. Leaders of both companies institutionalized the processes to tackle COPQ.

It is widely observed that managers loath to take the ownership and lead the change for some reason. If the COPQ assessment is thrust on managers, they typically call in consultants. This is largely because many of them either do not know how to proceed or, are afraid of the tougher part: execution. Both reasons doom the effort. A key takeaway then is, unless the management and the line staff do not take ownership, COPQ initiatives are bound to fail.

## Strategic Recommendations

- Qimpro believes that companies must look at assessing their COPQ on a priority basis. COPQ not only unlocks the hidden plant and thus directly contributes to the bottom line, but can also go a long way in improving customer satisfaction.
- The leaders should take initiative and drive COPQ activities. All the stakeholders must take ownership and become cost conscious.
- Companies should look at quality improvement projects to address chronic problems. They should aim at challenging the standard. By taking a project-by-project approach, companies can gain sustainable benefits.

## Additional Reading:

J M Juran, **Management of Quality**, Juran Institute, Inc, Wilton, 1987.

Suresh Lulla, **World-Class Quality: An Executive Handbook**, Tata McGraw-Hill Publishing, New Delhi, 2003

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