

TABLE 5.1: Costs of Quality¹⁰

COST CATEGORY	COST COMPONENTS	
Prevention Costs	Quality systems development Quality engineering Quality training Quality circles (volunteer groups of employees who meet regularly to solve work-related quality problems) Statistical process control	Supervision of prevention activities Quality data gathering, analysis, and reporting Quality improvement projects Technical support provided to suppliers Audits of the effectiveness of the quality system
Appraisal Costs	Testing and inspection of incoming materials Testing and inspection of in-process goods Final product testing and inspection Supplies used in testing and inspection	Supervision of testing and inspection activities Depreciation of test equipment Maintenance of test equipment Field testing and appraisal at customer's site
Internal Failure Costs	Net cost of scrap Net cost of spoilage Rework labor and overhead Re-inspection of reworked products	Retesting of reworked products Downtime caused by quality problems Disposal of defective products Analysis of the cause of defects in production
External Failure Costs	Cost of servicing and handling customer complaints Warranty repairs and replacements Repairs and replacements beyond the warranty period Product recalls	Liability arising from defective products Returns and allowances arising from quality problems Lost sales arising from a reputation for poor quality