

QUALITY COSTS

**NORTH JERSEY SECTION
MEETING
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ORIGIN OF CONCEPT

- ❑ Originally introduced in 1956 by Feigenbaum
- ❑ Products became more complex
- ❑ Customer's expectations were becoming more sophisticated
- ❑ Quality Improvements were being made and needed to be measured
- ❑ ITT and Westinghouse were using concept in 50's and 60's

SOME ADVANTAGES

- ❑ Provides management a single overview of quality.
- ❑ Provides a way to distribute quality costs
- ❑ Improves the effective use of resources
- ❑ Tool to measure quality improvement projects
- ❑ Gets top management attention

OLD PHILOSOPHY

- Costs were hidden in financial records
- Accounting departments were not receptive to helping
- IT Departments did not issue reports to follow concepts

NEW PHILOSOPHY

- ❑ Accounting Departments now provide information
- ❑ Computer departments now generate data to follow Quality Costs

**Applicable to both
Manufacturing and Service
Organizations**

**Identified as a
Quality Tool
in
ISO and QS Standards**

TYPES OF QUALITY COSTS

- **Prevention Costs** – Those efforts devoted to preventing poor quality
- **Appraisal Costs** – Those efforts devoted to maintaining quality levels by means of formal evaluations
- **Failure Costs** – Those efforts devoted to products that do not meet specifications or which fail to meet the customer's expectations.

PREVENTION COSTS

Costs associated to PREVENT poor quality

- Training
 - Capability Studies
 - Vendor Surveys
 - Any quality design
 - Quality planning
 - Quality improvement meetings
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APPRAISAL COSTS

Costs associated with EVALUATING

- Inspection and test
- Test equipment maintenance and calibration
- Inspection and test reporting
- Other expense reviews
- Product, process or service audits
- Costs for supplies and materials

INTERNAL FAILURE COSTS

Failure costs PRIOR to delivery

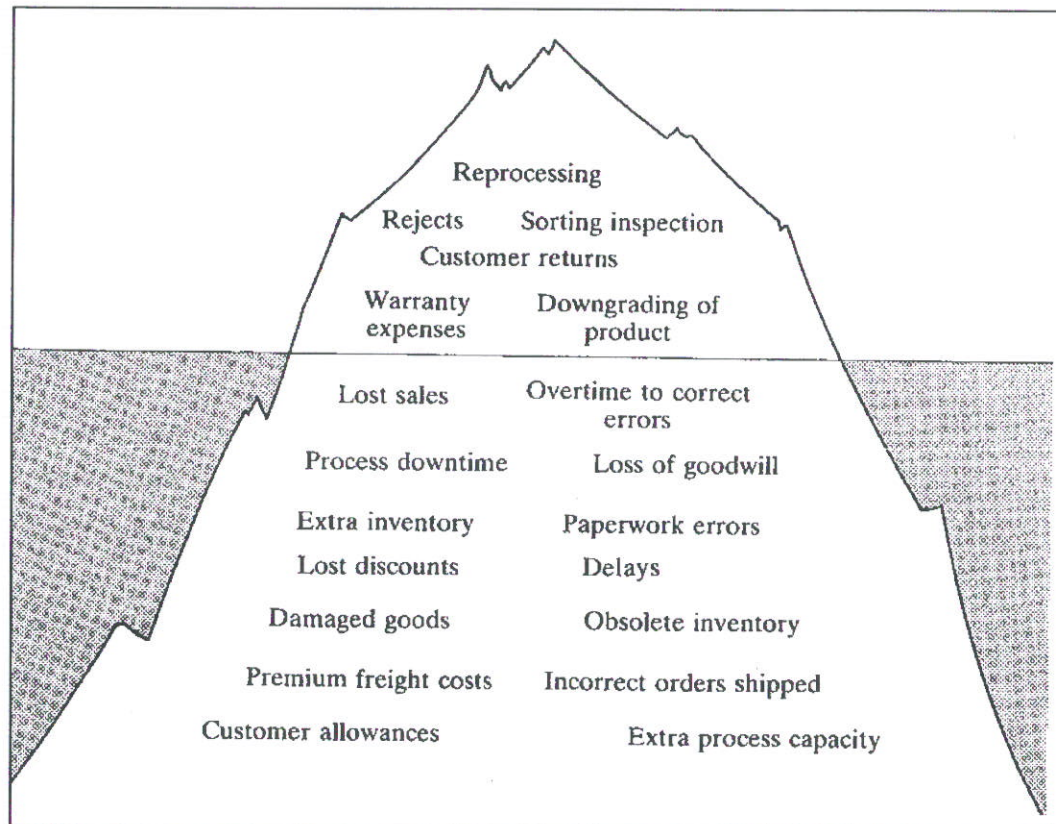
- Scrap/Rework
 - Design Changes
 - Retyping letters or any rework
 - Re-inspection
 - Material review
 - Late time cards
 - Excess inventory costs
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EXTERNAL FAILURE COSTS

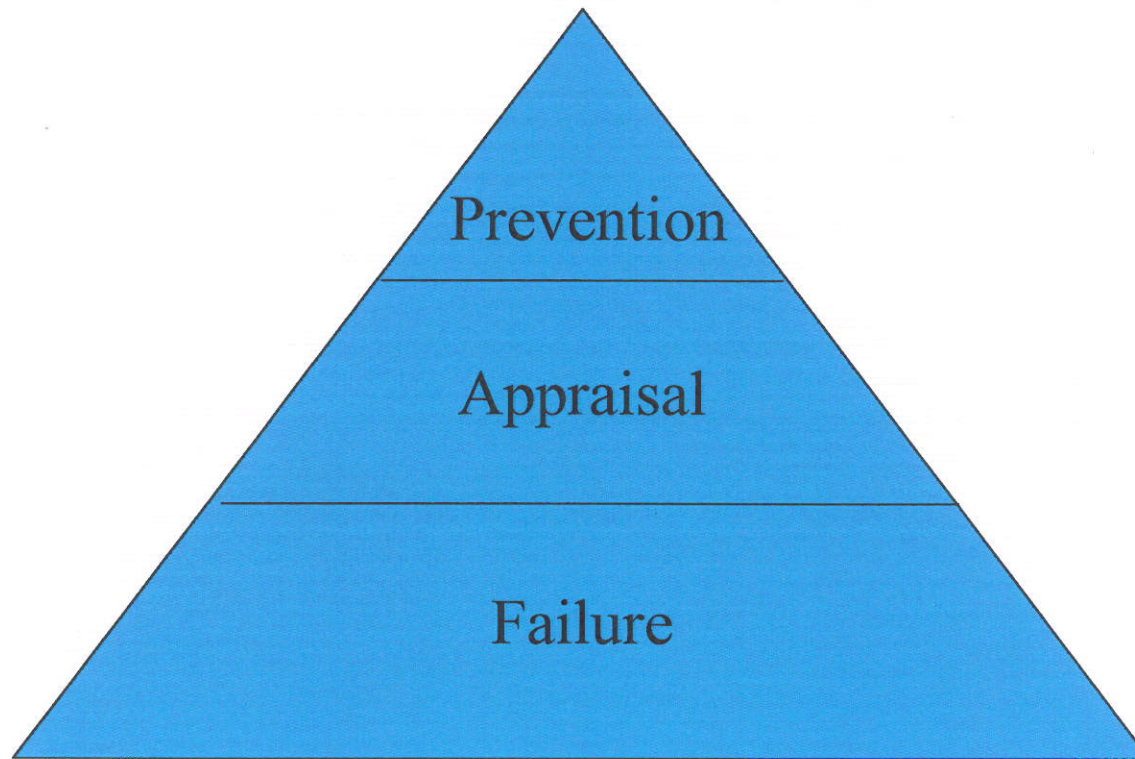
Failure costs AFTER delivery

- Warranty costs
- Customer complaint visits
- Field Service training costs
- Returns/Recalls
- Liability suits

HIDDEN COSTS OF POOR QUALITY



TYPICAL COSTS



COST RELATIONSHIPS

COST CATEGORY

PERCENT OF TOTAL

Prevention

0-5

Appraisal

10-50

Internal Failure

20-40

External Failure

20-40

COMPARISON BASES

Quality costs have to be related to a common base.

COMPARISON BASES

Labor Bases

- Total direct labor
- Standard labor

Manufacturing cost bases

- Direct Labor
- Direct Material

Sales bases

- Net sales billed

Unit bases

- Quality costs related to production