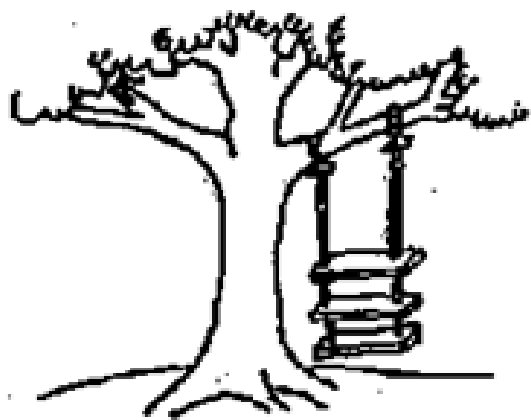
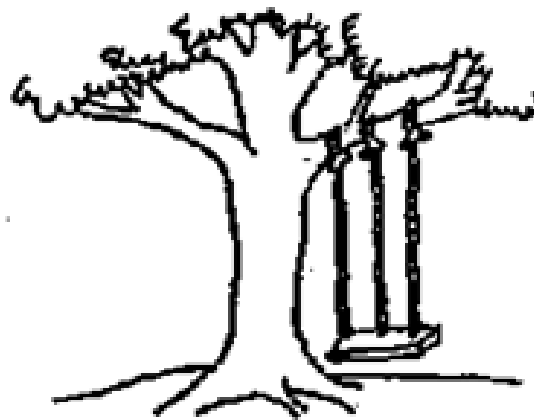


Quality Assurance



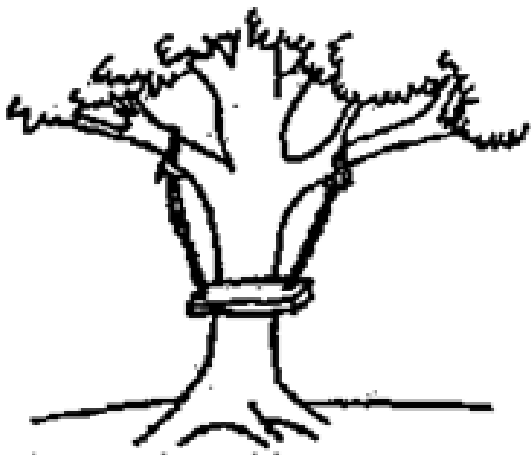
As proposed by the project sponsor.



As specified in the project request.



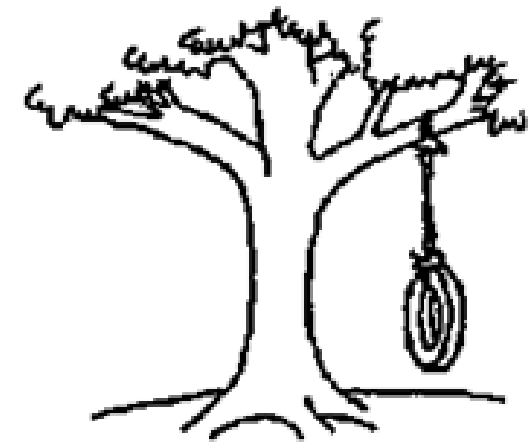
As designed by the senior analyst.



As produced by the programmers.



As installed at the user's site.



What the user wanted.

Quality and cost

Product features that meet customer needs

Higher quality enables companies to:

- Increase customer satisfaction

- Make products salable

- Meet competition

- Increase market share

- Provide sales income

- Secure premium prices

The major effect is on sales.

Usually, higher quality costs more.

Freedom from deficiencies

Higher quality enables companies to:

- Reduce error rates

- Reduce rework, waste

- Reduce field failures, warranty charges

- Reduce customer dissatisfaction

- Reduce inspection, test

- Shorten time to put new products on the market

Major effect is on costs.

Usually, higher quality costs less.

What is Quality

- 1.** "Quality" means those features of products which meet customer needs and thereby provide customer satisfaction.
- 2.** "Quality" means freedom from errors that require doing work over again (rework) or that result customer dissatisfaction.

Definitions

Product: The output of any process. Goods or services.

Product feature: A property processed by product to meet customer needs.

Customer: Anyone who is affected by the product.

Customer satisfaction: A state in which customers feel that their expectations have been met by the product features.

Deficiency: Any fault (defect, error) that impairs product's fitness for use.

Customer dissatisfaction: A state in which deficiencies in product result in customer annoyance.

To Manage for Quality

- Quality planning.
- Quality control.
- Quality improvement.

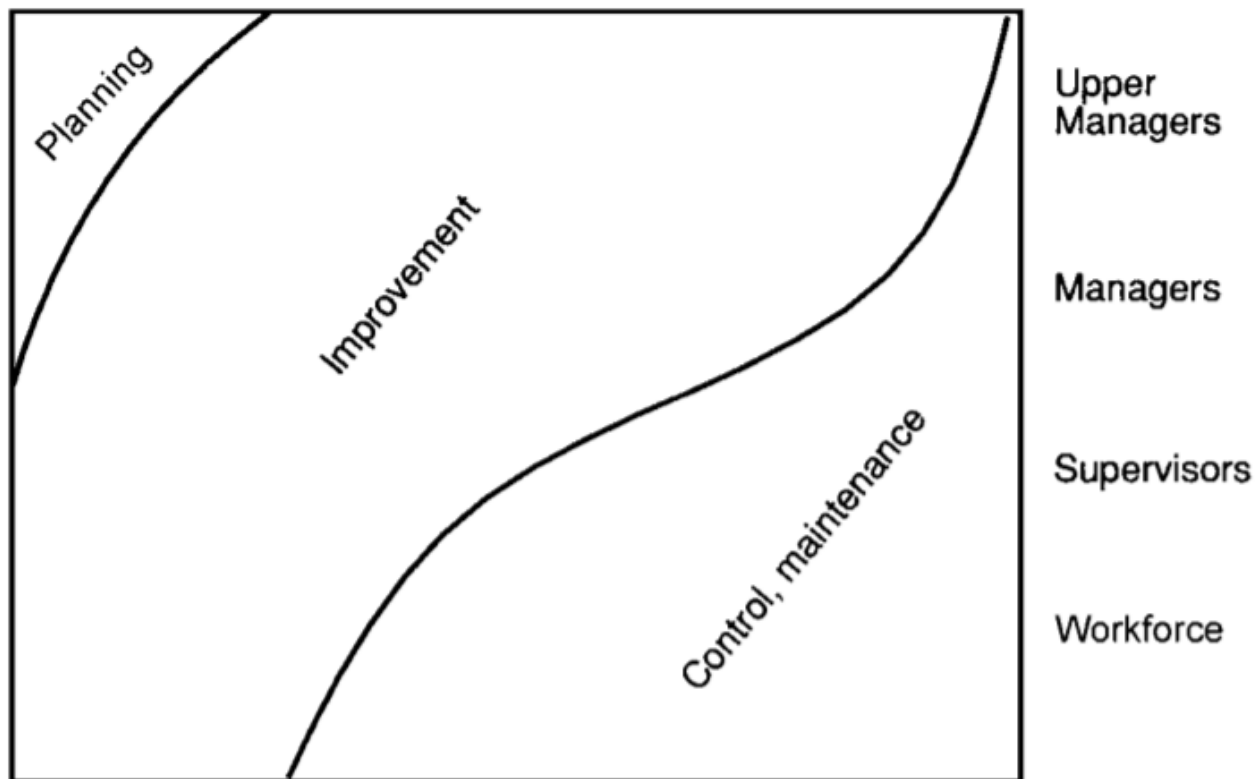


FIGURE 2.4 The Itoh model. [Adapted from *Management for Quality*, 4th ed. (1987). Juran Institute, Inc., Wilton, CT, p. 18.]