

Total Quality Management
Mechanical Technology Chapter 6 Notes
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Chapter 6

Supplier Partnership

- 60% of the cost of goods sold in 2000 consisted of purchased goods
- Therefore, supplier quality can substantially affect the overall cost of a product or service
- Dr. Deming stated that customers must stop awarding business based on the low bidder because price has no basis without quality
- He also advocated single suppliers for each item to develop a long-term relationship of loyalty and trust
- To meet the requirements of ISO9000, management must maintain supply chain development through three key factors:
 - zero defects, 100% on-time delivery, and a process for continuous improvement.

1. Ishikawa's Principles of Customer/Supplier Relations

- i. Both the customer and the supplier are fully responsible for the control of quality.
- ii. Both the customer and the supplier should be independent of each other and respect each other's independence.
- iii. The customer is responsible for providing the supplier with clear and sufficient requirements so that the supplier can know precisely what to produce.
- iv. Both the customer and the supplier should enter into a non-adversarial contract with respect to quality, quantity, price, delivery method, and terms of payments.
- v. The supplier is responsible for providing the quality that will satisfy the customer and submitting necessary data upon the customer's request.
- vi. Both the customer and the supplier should decide the method to evaluate the quality of the product or service to the satisfaction of both parties.
- vii. Both the customer and the supplier should establish in the contract the method by which they can reach an amicable settlement of any disputes that may arise.
- viii. Both the customer and the supplier should continually exchange information, sometimes using multifunctional teams, in order to improve the product or service quality.
- ix. Both the customer and the supplier should perform business activities such as procurement, production and inventory planning, clerical work, and systems so that an amicable and satisfactory relationship is maintained.

- x. When dealing with business transactions, both the customer and the supplier should always have the best interest of the end user in mind.

2. Partnering

- There are three key elements to a partnering relationship
 - i. *Long-Term Commitment*
 - ii. *Trust*
 - iii. *Shared Vision*

3. Three key elements of sourcing

i. Sole

- *sole* source of supply implies that the organization is forced to use only one supplier. This situation is due to factors such as patents, technical specifications, raw material location, only one organization producing the item, or the item being produced by another plant or division of the organization. Partnering is a natural consequence of this type of sourcing, provided the supplier is willing to work together to satisfy the end user.

ii. Multiple

- The theory of multiple sourcing is that competition will result in better quality, lower costs, and better service. However, in practice, an adversarial relationship may result without the claimed advantages.
- Multiple sourcing also eliminates disruption of supply due to strikes and other problems

iii. Single

- planned decision by the organization to select one supplier for an item when several sources are available. It results in large, long-term contracts and a partnering relationship. With a guaranteed future volume, the supplier can direct its resources to improve the processes.
- For the organization, the advantages are reduced business and production cost, complete accountability, supplier loyalty, and a better end product with less variability.
- Delivery disruption is always a problem and is even more so with just in time (JIT) implementation.

4. Supplier Selection

- This decision is a strategic one that must be made during the design stage. The following three questions need to be answered:
 - How critical is the item to the design of the product or service?
 - Does the organization have the technical knowledge to produce the items internally? If not, should that knowledge be developed?
 - Are there suppliers who specialize in producing the item? If not, is the organization willing to develop such a specialized supplier?

5. Conditions for selection and evaluation of suppliers

- i. The supplier understands and appreciates the management philosophy of the organization.
- ii. The supplier has a stable management system.
- iii. The supplier maintains high technical standards and has the capability of dealing with future technological innovations.
- iv. The supplier can provide those raw materials and parts required by the purchaser, and those supplied meet the quality specifications.
- v. The supplier has the capability to produce the amount of production needed or can attain that capability.
- vi. There is no danger of the supplier breaching corporate secrets.
- vii. The price is right and the delivery dates can be met. In addition, the supplier is easily accessible in terms of transportation and communication.
- viii. The supplier is sincere in implementing the contract provisions.
- ix. The supplier has an effective quality system and improvement program such as ISO 9000 etc.
- x. The supplier has a track record of customer satisfaction and organization credibility

6. Requirements of Supplier Certification

- i. The customer and supplier shall have agreed upon specifications that are mutually developed, justifiable, and not ambiguous
- ii. The supplier shall have no product-related lot rejection for a significant period of time
- iii. The supplier shall have no nonproduct-related rejections for a stated period of time
- iv. The supplier shall have no negative nonproduct-related incidents for a stated period
- v. The supplier shall have a fully-documented quality system, typically ISO 9000

- vi. The supplier shall have successfully passed an on-site system evaluation
- vii. The supplier must conduct inspections and tests
- viii. The suppliers shall have the ability to provide timely inspection and test data

7. Supplier Rating

A successful supplier rating system requires three key factors:

- i. An internal structure to implement and sustain the rating program,
- ii. A regular and formal review process, and
- iii. A standard measurement system for all the suppliers

8. Relationship Development

- i. Inspection
- ii. Training
- iii. Team Approach
- iv. Recognition