Lecture III

Quality in a Supply Chain

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Definitions of Quality

Tradition and Modern Definitions of Quality
Performance (operations)
Features (extras)
Reliability (no failures)
Conformance (meet specifications)
Durability (length of usefulness)
Serviceability (speed/ease of repair)
Aesthetics (pleasing to the senses)
Perceived Quality (reputation)

Service Quality
Reliability
Responsiveness
Completeness
Consistency
Security
Access/Convenience
Communication/Understanding the Customer

Traditional Definition
“Conformance to Requirements”
Meeting product specifications

Conformance to Requirements

Specification Limits

"Out of spec."
Definitions of Quality

Conformance to Requirements

[Inspecting quality in]

Scrap or repaired

Scrap or repaired

Definitions of Quality

The 99.9% Problem –
1. hour of unsafe drinking water each month
2. plane crashes per day at Chicago O’Hare airport
12. switched newborn babies per day
500. incorrect surgical operations per week
2000. lost pieces of mail in per hour in the U.S.

Definitions of Quality

“The best time to fix your roof is when
the sun is out.”

“But then it is not leaking!!”

Definitions of Quality

“Fitness for Use”

Juran’s definition in the Quality Handbook

“process through which we measure actual quality performance, compare it with standard and act on the difference”

Definitions of Quality

Taguchi’s focus

on
process and product variation
as well as
meeting specifications
Definitions of Quality

Example

Taguchi's “Loss Function”

Definition of Quality

“Customer Satisfaction”

Transition of Terminology

Quality Control
Statistical Quality Control
Quality Assurance
Total Quality Management

Customer Satisfaction

Categories of “Products”

Goods
Services
Information (software)

Customer Satisfaction

Customers
(Stakeholders)

Internal Customers
External Customers

Internal Customer Satisfaction

competition vs. cooperation
[influence of performance evaluation systems]
Customer Satisfaction

External Customer Satisfaction

Customer companies and Final users

Supply Chain

transforming “external” to “internal”

Customer Satisfaction

Vendor Relations

Partnering

Sharing of information

Opportunities and Constraints in a Global Market

Labor costs
Cultural differences in both and customers
Logistics issues