EIN 3236 Lecture 2

Voice of the Customer and S4/IEE Define Phase

Chapter 2

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Voice of the Customer and S4/IEE Define Phase

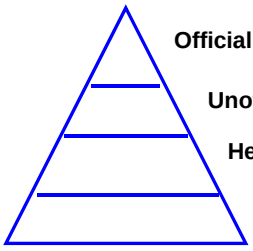
Introduction

- Key system outputs of an organization should be tracked as a process.
- Customer satisfaction: common metrics to all
- Voice of customer
- Knowledge-centered activity (KCA) describes efforts for wisely obtaining knowledge, and then utilizing this knowledge within organizations and processes.

2.1 Voice of the Customer: Some Facts

- Most customers do not complain if a problem exists
  - 50% encounter a problem but do not complain
  - 45% complain at the local level
  - 5% complain to top management
- On problems with loss of over $100 and resolved
  - only 45% of customers will purchase again
  - only 19% if not resolved
- Word-of-mouth behavior is significant.
  - If a large problem is resolved to the customer's satisfaction, about 8 persons will be told about the experience.
  - If dissatisfied with the resolution, 16 others will be told.

Complaint Responses



B. Joiner, 1996

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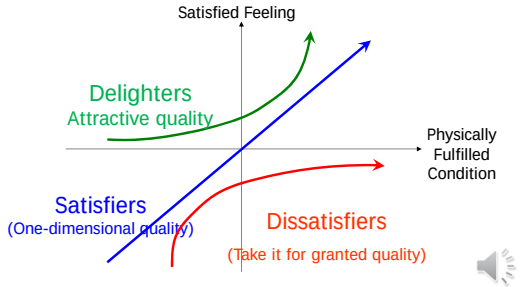
2.1 Voice of the Customer: More Facts

- The end user of a product is NOT the only customer.
  - Internal customers
  - External customers: End user, Intermediate customers
- Need variety of sources to capture Voice of the Customer
  - Surveys, Interviews, Focus groups
  - Feedback/Complaint process
  - Quality Function Deployment (Ch. 13)

Figure 2.1 Kano Diagram: Satisfied Feeling vs Condition



2.2 A Survey Methodology to Identify Customer Needs

Determine survey objectives

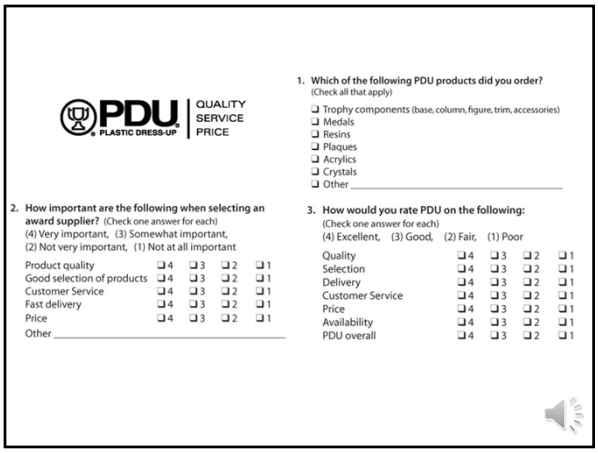
Develop survey

1. Conduct brainstorming session(s) to identify a wish list of features, problem resolutions, and so forth.
2. Rank the ideas, if too many.
3. A set of questions is determined and worded from a positive point of view.

Administer survey

Analyze survey - Perceptual map format

Use data to identify improvement need



PDU PLASTIC DRESS-UP | QUALITY SERVICE PRICE

1. Which of the following PDU products did you order?
(Check all that apply)

- ❑ Trophy components (base, column, figure, trim, accessories)
- ❑ Medals
- ❑ Resins
- ❑ Plaques
- ❑ Acrylics
- ❑ Crystals
- ❑ Other _____

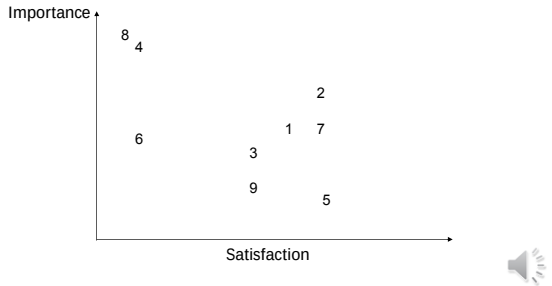
2. How important are the following when selecting an award supplier? (Check one answer for each)
(4) Very important, (3) Somewhat important,
(2) Not very important, (1) Not at all important

Product quality	❑4	❑3	❑2	❑1
Good selection of products	❑4	❑3	❑2	❑1
Customer Service	❑4	❑3	❑2	❑1
Fast delivery	❑4	❑3	❑2	❑1
Price	❑4	❑3	❑2	❑1
Other _____				

3. How would you rate PDU on the following:
(Check one answer for each)
(4) Excellent, (3) Good, (2) Fair, (1) Poor

Quality	❑4	❑3	❑2	❑1
Selection	❑4	❑3	❑2	❑1
Delivery	❑4	❑3	❑2	❑1
Customer Service	❑4	❑3	❑2	❑1
Price	❑4	❑3	❑2	❑1
Availability	❑4	❑3	❑2	❑1
PDU overall	❑4	❑3	❑2	❑1

2.2 A Survey Methodology to Identify Customer Needs



5. **If you placed your order by phone, how would rate your PDU Customer Service Representative:**
(Check one answer for each)
(4) Excellent, (3) Good, (2) Fair, (1) Poor

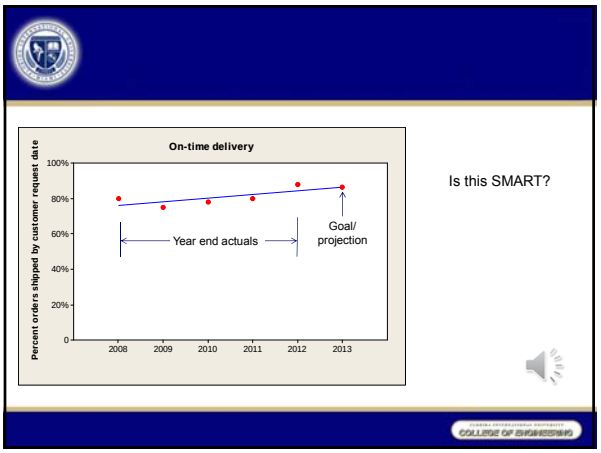
Problem solving	❑4	❑3	❑2	❑1
Time "on hold" waiting to place your order	❑4	❑3	❑2	❑1
Product knowledge	❑4	❑3	❑2	❑1
Your CSR on an overall basis	❑4	❑3	❑2	❑1

9. **How can PDU improve their service?**

2.3 Goal Setting and Measurements

Goals are to be SMART: Simple, Measurable, Agreed to, Reasonable, and Time-based.

- Situation 1: A goal to get house work done on a Saturday.
- Situation 2: A goal to make 50% return on your investment.



Is this SMART?

2.4 Scorecard: Balanced Scorecard

Financial:
- Inventory levels
- Cost per unit
- Hidden factory
- Activity-based costing
- Cost of poor quality (COPQ)
- Cost of doing nothing diff (CODND)
- Overall project savings

Internal Process:
- Defects: DPMO, Sigma quality level
- On-time shipping
- Rolled throughput yield
- Cycle time
- Volume hours
- Baseline measurements
- KPIVs

Customer:
- Customer satisfaction (CTQ)
- On-time delivery
- Product quality (KPOV)
- Safety
- Communications

Learning and Growth:
- 6σ tool utilization
- Quality of training
- Meeting effectiveness
- Lessons learned
- # of Employees trained in 6σ
- Project schedule vs. actual progress
- # of projects completed
- Total $ saved on 6σ projects

Perspective	Measure	Good	Bad	January	Febuary	March
Financial	Material Cost to Gross Revenue	28	34	34	31	32
	Operating Margin	0.28	0.23	0.24	0.21	0.22
	Scrap & Rework	0.03	0.06	0.03	0.03	0.05
Customer	Satisfaction rating	97%	92%	98%	97%	97%
	On time delivery	95%	85%	85%	82%	83%
	Inventory Available	98%	93%	99%	98%	97%
Internal	Operator % to standard output	100%	95%	110%	105%	105%
	Cycle time days	5	7	4.5	5.0	4.8
	1st time test yield	95%	85%	96	94%	92%
Learning and Growth	Employee turnover	95%	85%	95%	95%	90%
	On time training	95%	95%	98%	97%	97%
	Six sigma/Lean Projects completed	2	1	2	2	1

2.5 Problem Solving and Decision Making

Common process for problem solving or decision making:

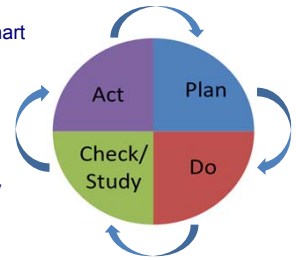
- Become aware of a problem or needed action.
- Define the problem or needed action.
- Consider alternatives and their consequences.
- Select an approach.
- Implement the approach.
- Provide feedback.

Type III error in decision making:

- The wrong basic problem is often solved.

2.5 Problem Solving and Decision Making

Process Improvement Flowchart
- Shewhart -
Plan-do-check-act (PDCA)



Improvement Methodology
- Deming -
Plan-do-study-act (PDSA)

8D process

Standardized Problem-solving Process (Chrysler, Ford, GM):
8 disciplines (8D)

D-0 Decide to use the 8D Process
D-1 Establish Team
D-2 Describe Problem
D-3 Implement Interim Containment
D-4 Find Root Cause
D-5 Develop alternate solutions
D-6 Implement Permanent Corrective Action
D-7 Prevent Recurrence
D-8 Congratulate Team

2.7 S⁴/IEE DMAIC Define Phase Execution

Define phase: describes the CTQ/business issue, the customer, and the involved core business process.

- Problem statement is formulated;
  - A 2-3 sentence problem statement
  - Focus on the symptoms and not the possible solution.
- Process is defined.
  - Identification of both internal and external customers;
  - Development of high-level process map – four-seven steps
  - Initiation of SIPOC:
    Suppliers, Inputs, Process, Outputs, Customers

SIPOC Example

SUPPLIERS	INPUTS	PROCESS	OUTPUTS	CUSTOMERS
Computer owner	Computer	**Process Description: Repair of computer**	Repaired Computer	Computer owner
Parts Suppliers	Components	Customer drops off computer ⇩ Diagnostics performed. ⇩ Estimate repair cost and time ⇩ Get customer approval for repairs ⇩ Perform repairs ⇩ Test/verify repairs ⇩ Customer picks up computer.	Invoice	
Software suppliers	Software			

2.7 S⁴/IEE DMAIC Define Phase Execution: Focus Areas: Project Scope

- Project scope is determined
  - Identification and definition of what is to be improved;
  - The project scope needs to be sized correctly and documented in a project charter format.
  - Projects should be large enough to justify the investment of resources, but small enough to ensure problem understanding and development of sustainable solutions.
  - The scope should accurately define the bounds of the project so project creep is avoided.

2.7 S⁴/IEE DMAIC Define Phase Execution: Focus Areas: Measurements

- Measures are defined
  - Definition of the CTQ/30,000-foot-level metrics;
  - Identification of specific process metrics
  - Estimation of COPQ/CODND;
  - The financial liaison should work closely with the project leader and champion to create a cost-benefit analysis for the project.
  - Targeted improvement goals should be SMART.

2.7 S⁴/IEE DMAIC Define Phase Execution: Focus Areas: Stakeholders

- Stakeholders (finance, managers, people who are working in the process, upstream/downstream departments, suppliers, and customers) need to agree to the usefulness of the project and its problem statement.
- All involved need to agree to the objectives, scope, boundaries, resources, project transition, and closure of the project charter.
- The details of the charter should be updated as the project proceeds and stakeholders informed of progress.

2.7 S⁴/IEE DMAIC Define Phase Execution: Focus Areas: Project Team

- Team members should be selected by the champion and project leader (e. g., black belt) such that they provide different insights and skills (e.g., self-facilitation, technical/subject matter expert) needed for the successful completion of the project in a timely fashion.
- Names, roles, and amount of time for project dedication should be addressed for each team member.

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Related Assignments

No assignments associated with this lecture.