Notes:

Voice of the Customer Matrix

Key Learning Points

1. Describe the importance of collecting the voice of the customer.
2. Explain how to develop a voice of the customer matrix.
3. Utilize voice of the customer matrices in improvement projects.

What is the Voice of the Customer?

The needs of the customer are described in business as the voice of the customer (VOC). The voice of the customer can be collected in many ways, from interviews to online surveys.

It is key to identify all customers, internal and external, and understand their needs before moving forward with projects. Internal and external customers were discussed in the section on Thinking about Quality. Critical to Quality measures (CTQs) are measurable, key characteristics of the service or process that must be improved to meet customers' needs.

Understanding CTQs enables a team to satisfy customer requirements in measurable terms, and to know how good is good enough as it relates to the problem the team is trying to solve.

Notes:

The Voice of the Customer (VOC) to Critical to Quality (CTQ)

Identify

Create a list of external and internal customers

Discover Needs

Discover and prioritize a list of customers and their needs (also known as the voice of the customer or VOC). Use the affinity process to set key themes.

Translate

Translate the voice of the customer into measurable critical to quality needs.

Voice of the Customer Matrix Examples

Healthcare

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
1	Patient	I have county care, how come the clinic didn't tell me that I no longer had coverage? I can't afford to pay anything. I don't care how cheap it is.	No clear communication process with patient in regards to their expectation	Timely communication to patient of financial estimate, responsibility, and expectations
2	Pre-certification	Error in insurances and patient date of birth, Incorrect policy numbers, not enough clinical data, notes, wrong PCP listed	Insufficient / Incorrect data delays the authorization process	Correct insurance information
3	Registrar Financial Counselor	We need for the patients to be prepared with all the necessary paperwork when the arrive for their appt.	Patients arrive without referrals or orders which then delays the whole process	Patients arrive with all required paperwork

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
4	Ancillary Departments	Patient comes in with an order without a referral, registration says it is not their job to get the referral and then the technologist call for the referral. Patient has been here since 11 a.m. and don't come to department until 5-5:30 which causes overtime for technologist.	Registration not clear on what documents they are required to obtain which can cause delays	Registration (C1200) and department staff are competent in obtaining financially cleared visits
5	Patient	I arrived 30 minutes early for my exam, was registered and sent to the department, and there the tech told me that I could not have my exam because insurance wasn't cleared.	Inconsistent communication process between departments: Pre-certification, Registration, and Ancillary Dept.	Correct determination of Financial clearance by registration
6	Registration	Financial Counseling services not available to clear patients early in the morning.	Limited hours of operation result in longer patient wait times	Financial counseling services during all diagnostic service hours
7	Financial Counseling	Need hard guidelines for such services as infertility.	Patients who are not financially cleared are still able to obtain services, there is no clear direction on how to handle gray areas of financial clearance	Support for staff in the event a patient is not prepared

Notes:

Service

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
1	Contracts Department	We do not have control over vendor contracting. Contracts continue to be executed in silos, creating inefficiency in the contracts department.	There is no well-defined P&Ps for vendor contract execution, and no metrics to achieve accountability	Deliver P&P documents, Achieve 100% compliance to contract execution procedures
2	Contracts Department	Functional areas do not always conduct appropriate review of requirements in contract language prior to submitting to the contracts department for legal review.	There are no well-defined roles and responsibilities in the contract execution process	Define roles and responsibilities in P&P documents; Achieve 100% compliance to contract execution process
3	Contracts Department	We do not have a comprehensive picture of the vendor relationship environment.	The central repository is incomplete, missing contracts create an incomplete enterprise vendor relationship picture	Achieve 100% inclusion of all contracts in appropriate central repository
4	Contracts Department	Staff does not understand the complexities associated with contract compliance in the sector.	Appropriate training is not provided to relevant staff	Provide appropriate compliance training to relevant staff; Achieve 100% compliance training for all existing and new contracts/legal and manager level personnel

Notes:

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
5	Contracts Department	We do not always know when appropriate controls need to be applied to contractual agreements.	Contract department does not have appropriate tools to make consistent decisions about control mechanisms	Deliver tools in for of flow charts and algorithms that can be applied to contracts prior to execution; achieve 100% compliance with procedures

Manufacturing

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
1	Process Water Attendant	I cannot utilize lost product that hits the floor and Trim Waste "Man Down Potatoes"	No current ability to grind these potatoes	Starch recovery >.7018%
2	Process Water Attendant	When the formline is down I cannot use all of the slivers and nubbins in the grinder for starch	Grinder is too small	Starch recovery >.7018%
3	Process Water Attendant	I need a balanced water system / contain all water that we possibly can	Ensuring that the standard pressures are correct and maintained and that all level controls are working correctly	Starch recovery >.7018%
4	Western Polymer	I need 20-21 Baume Starch clean and free of noxious odor	If under 15 Baume becomes difficult to process	Baume > 20
5	Process Water Attendant	I need the waterknife room running and producing fries to collect starch from the water	Process line is running optimally	0% unplanned downtime

Notes:

Rank	Customer	Voice of the Customer	Key Issue	CTQ (The Y)
6	Digester	I need to reduce my diet of starch laden fibrous water	Reduces performance of the digestor and operating capacity; Adds material to the digestor	Digester influent COD<10,000 ppm

Two Types of Customers

External Customers

External customers are not a part of the organization providing a particular product or service. While the obvious external customers of any organization are the paying customers, there are other customers as well.

	Service Organization	Healthcare Organization	Manufacturing Organization
Primary Customer	Consumer Caller Subscriber	Patient	The Purchaser
Other External Customers	Product Supplier Community Shipper Telephone Company Regulators	Physician Payor (insurance) Regulators	Merchants Processors Suppliers Potential Purchasers Regulators Policy Makers The Public

Internal Customers

Internal customers are those people within an organization who are affected in some way by work done. Satisfying external customers requires that you also satisfy the needs of internal customers.

Notes:

	Service Organization	Healthcare Organization	Manufacturing Organization
Internal Customers	Phone Reps IT Support Mgmt. Billing Department	Admitting Bedside Nurses Medical Record Dept. Lab Pharmacy Financial Services	Processors Assembly Line Mgmt. Billing Department Shipping Department

Notes:

Systems Thinking and Transformational Change

Organizations are like living organisms. They consist of a number of subsystems, each of which performs a vital specialized function that makes specific, unique, and essential contributions to the life of the whole. A given individual subsystem is devoted to its own specific function such as design, production, management, maintenance, sales, procurement, and adaptability. One cannot carry the biological analogy very far because living organisms separate subsystems with physical boundaries and structures (e.g., cell walls, the nervous system, the digestive system, the circulatory system, etc.). Boundaries and structure of subsystems in human organizations, on the other hand, are not physical; they are repetitive events, activities, and transactions. The repetitive patterns of activities are, in effect, the work tasks, procedures, and processes carried out by organizational functions. Open systems theorists call these patterns of activities roles. A role consists of one or more recurrent activities out of a total pattern of activities which, in combination, produce the organizational output. Roles are maintained and carried out in a repetitive, relatively stable manner by means of mutually understood sets of expectations and feedback loops.

The Triple Role Open Systems theory and Juran's model focuses particularly on the technical methods, human relationships, organization structures, and interdependence of functional roles associated with these activities and transactions. Detailed knowledge of the repetitive transactions between the organization and its environment, and also within the organization itself, is essential in accomplishing breakthroughs because these transactions determine the effectiveness and efficiency of performance.

The triple role is a model that applies equally to an organization as a whole, to individual subsystems and organizational functions (e.g., departments and workstations within the organization, and to individual organizational members performing tasks in any function or level. All these entities perform three more or less simultaneous roles, acting as supplier, processor, and customer. Acting as a processor, charged with the duty of transforming imported energy, organizations receive raw materials-goods, information, and/or services- from their suppliers, who may be located inside or outside the organization. The processor's job consists of transforming the received things into a new product of some kind-goods, information, or service. In turn, the processor supplies the product to his or her customers who may be located within or outside the organization. Each of these roles requires more than merely the exchange of things. Each role is linked by mutually understood expectations (i.e., specifications, work orders, and procedures) and feedback as to how well the expectations are being met (i.e., complaints, quality reports, praise, and rewards). In addition, the processor provides the supplier with feedback on the extent to which the expectations are being met. This feedback is part of the control loop and helps to ensure consistent adequate performance by the supplier. The customer bears the same responsibilities to his or her processors who, in effect, are also suppliers (not of the raw materials but of the product).

When defects, delays, errors, or excessive costs occur, causes can be found somewhere in the activities performed by suppliers, processors, and customers, in the set of transactions between them, or perhaps in gaps in the communication of needs and feedback. Breakthrough efforts must uncover the precise root causes by deep probing and exploration. If the causes are really elusive, discovering them may require placing the offending repetitive process under a microscope of unprecedented power and precision, as is done in Six Sigma. Performance excellence initiatives require that all functions and levels be involved, at least to some extent, because each function's performance is interrelated and dependent to some degree on all other functions. Moreover, a change in the behavior of any one function will have some effect on all the others, even though it may not be apparent at the time. This interrelatedness of all functions has practical day-to-day implications for a leader at any level, that is, the imperative of using "systems thinking" when making decisions, particularly decisions to make changes. Because an organization is an open system, its life depends on (1) successful transactions with the organization's external environment and (2) proper coordination of the organization's various specialized internal functions and their outputs.

The proper coordination and performance of the various internal functions is dependent on the management processes of planning, controlling, and improving and on human factors such as leadership, organizational structure, and culture. To manage in an open system (such as an organization), management at all levels must think and act in systems terms. Managers must consider the impact of any proposed change not only upon the whole organization but also the impact on the interrelationships of all the parts. Failure to do so, even when changing seemingly little things, can make some pretty big messes. Leaders need to reason as follows: "If there is to be a change in x, what is required (inputs) from all functions to create this change, and how will x affect each of the other functions, and the total organization as well (ultimate output/results)?" Organizations will not change until the people in them change, regardless of the breakthrough approach.

Notes:

The Voice of the Customer Matrix

Rank	Customer	Voice of the Customer	Key Issue	Critical to Quality
1				

- Rank: The rank could correspond to your highest priority customer or the customer you do the most work with. It is meant to allow you to focus on the vital few customers (think of the Pareto Principle and the 80/20 Rule).
- Customer: This is the list of people that receive your work; whether it be internal to your group or external to your group.
- Voice of the Customer: This information can be collected through interviews, conversations, observations, or surveys. The objective is to understand the customers needs in their language.
- Key Issue: This column is where you translate what the Voice of the Customer Feedback is into your project teams terminology. This helps you convert feedback into specific needs.
- Critical to Quality: This column is where you take the specific needs and convert them into measurable requirements for a product or process.

Steps to Complete the VOC Matrix

1. Identify customers, these can be both internal and external.
2. Discover customer needs. Collect the "voice of the customer" using their own language. Ask:
    a. What is important to you?
    b. What is the priority of what is important?
    c. How is the company doing in meeting those needs?
3. Identify key issues the customer noted, and group similar issues. This can be accomplished using the affinity process.
4. Translate customer needs into Critical to Quality Requirements (CTQs). CTQs need to:
    a. Be Specific
    b. Be Measurable
    c. Include a Metric to Measure

Notes:

Step 1: Complete These Columns First

Rank	Customer	Voice of the Customer	Key Issue	Critical to Quality
1	*Sales Team*	*"I hate using this sales form"*	*The form takes too long to fill out*	*Time to complete < 10 minutes*
2	*Enrollment and Billing*	*"I can't read the form"*	*The inputs are hand written and incomplete*	*All fields comply with submission standards*
3	*Customer Service*	*"We can't have temps verifying rates"*	*There is no subject matter expert checking rates during open enrollment*	*100% of staff passed proficiency assessment*
4	*Vice President*	*"We can't have bills going out with the wrong rates"*	*Billing is not notified until after the bills go out*	*Notification from install coordinator to Billing 1-3 days prior to billing*

Step 2: Now Translate the Key Issues into CTQs and Rank them

Rank	Customer	Voice of the Customer	Key Issue	Critical to Quality
1	*Sales Team*	*"I hate using this sales form"*	*The form takes too long to fill out*	*Time to complete < 10 minutes*
2	*Enrollment and Billing*	*"I can't read the form"*	*The inputs are hand written and incomplete*	*All fields comply with submission standards*
3	*Customer Service*	*"We can't have temps verifying rates"*	*There is no subject matter expert checking rates during open enrollment*	*100% of staff passed proficiency assessment*
4	*Vice President*	*"We can't have bills going out with the wrong rates"*	*Billing is not notified until after the bills go out*	*Notification from install coordinator to Billing 1-3 days prior to billing*

What is the Affinity Process?

The affinity process is an activity that organizes large amounts of verbal information into like categories. When asking customers what their needs are, each type of customer may respond differently. It is up to the team to group similar needs into vital few categories.

Example

Agent Accessibility

- "No one answered the phone when I called."
- "I called and got voicemail."

Notes:

- “The attendant couldn’t find my agent.”

Agent Knowledge

- “The agent didn’t have an answer to my question.”
- “The agent gave me an incorrect answer.”
- “I had to call three times before someone knew the answer to my question.”

Agent Professionalism

- “I want the agent to be professional.”
- “Some of the agents are not very friendly.”
- “The agent should really make you feel comfortable.”
- “Agents need to be patient during the process.”

The Affinity Process

How to Create

1. Write the VOC on adhesive notes or index cards.
2. Group like themes or issues
3. Create category names for the clusters
4. Prioritize the clusters

Approaches to Prioritizing

- By the relative impact on customer satisfaction of the needs represented by the cluster
- By the cost of producing the features represented in the cluster
- By the frequency of problems experienced
- By the impact of the problem

When Should a VOC Matrix Be Used?

It is key to identify all customers, internal and external, and understand their needs before moving forward with projects.

Understanding CTQs enables a team to satisfy customer requirements in measurable terms, and to know how good is good enough as it relates to the problem the team is trying to solve.

Pitfalls to Avoid

- Losing Needs

Notes:

- Seeking Perfection in Clusters
- Failure to Prioritize, Excessive Time Spent on Analyzing, Short-Changing Critical Needs

How to Avoid Pitfalls

Potential Pitfalls	How to Avoid
Losing Needs	Set up a spreadsheet reflecting the clusters developed. When recording the needs to the sheet, check off that each has been recorded. Check the list against documentation like surveys, customer feedback, etc.
Seeking Perfection in Your Clusters	Avoid spending too much time on the process. Remember, the process is merely a way to organize. Track changes throughout work.
Failure to Prioritize, Excessive Time Spent on Analyzing, Short-Changing Critical Needs	Agree on relative priorities at the start and allocate time accordingly.

Notes: