High Priority

In 50 Words Or Less

- Voice of the customer (VOC) analysis can be a valuable tool in defining and acting on requirements for business-to-business relationships.
- Along with VOC analysis, the Kano model helps you prioritize customer requirements, determine where you can improve and guide you to areas to innovate.

ASQ DEFINES VOICE of the customer (VOC) as "the expressed requirements and expectations of customers relative to products or services, as documented and disseminated to the providing organization's members."[1]

While early VOC analyses focused on product design, its use in business-to-business interactions has become more prevalent today. As the United States moves closer to becoming a service-based economy, it becomes important to deliver high-quality services and interactions. In this economy, it is critical to get closer to customers by increasing effectiveness and reducing failures. Conducting a VOC analysis is one way to address these challenges.

Voice of the customer analysis can **help you build** business-to-business relationships

By Marc Hamilton and Bob Caruso

Overcoming these challenges isn't easy. But it's possible, as we've personally experienced. After working on multiple projects as members of firms such as J.D. Power and Associates, PricewaterhouseCoopers and Deloitte, we believe the current method of business-to-business VOC analyses has limitations:

1. Requirements are more qualitative than quantitative, making them difficult to operationally define and act on.
2. There is a tendency to rely on either a few quantifiable factors (such as average response time and customer complaints) or anecdotal information from account-facing staff members.

These limitations can be overcome, however, by applying key VOC principles, which we will illustrate in examples at manufacturers and service companies.

Executing a VOC analysis

The steps in a VOC analysis process are similar to steps for other improvement efforts:

- **Plan:** Assign a leader and staff, identify discussion topics from internal staff and identify contacts across the touch points between the businesses.
- **Analyze:** Gather customer data, consolidate and prioritize requirements, and translate requirements.
- **Act:** Scope projects or department goals to address specifications, report requirements and plans to the customer, and then implement.

This process is fairly straightforward. The magic is in the details of how it is executed. A high-value VOC process successfully applies these four principles:

1. Gather all types of requirements.
2. Gather evidence to define the requirements.
3. Prioritize using the Kano model.
4. Attach requirements to processes and define specifications.

Gather all types of requirements

The tendency when analyzing customer requirements is to focus on the delivery of the core product or service (such as a piece of equipment or a software implementation). But customers have requirements for all touch points among the companies that impact their perception of quality.

For example, a semiconductor components company wanted to increase customer satisfaction as part of a supply chain systems implementation and undertook a VOC analysis process. Gathering all types of requirements called for interviews conducted across functions, each with different requirements:

- Manufacturing (delivery).
- Finance (invoicing).
- Quality (product quality).
- Procurement manager (bid response and pricing).
- Production planning (flexibility).

Table 1 shows some of the requirements by function for a customer of the semiconductor manufacturer. A focus on only the requirements of manufacturing (delivery) would have come up short of the project's goals.

Cross-functional interviews often show a convergence of key requirements. For example, an order management software company conducted a VOC analysis at a global networking company, its largest client. The software company interviewed staff from different functions.

Naturally, there were requirements unique to each function, but the surprise was the common requirement—the exchange of knowledge and ideas. This is shown in Table 2.

If the software company heard this message from only the project manager or software users, the message might not have carried a lot of weight. But when it heard the chorus from everyone, the software company knew it was a priority.

Requirements by function—customer of semiconductor manufacturer / TABLE 1

Customer function	Sample of requirements for "ease of doing business"
Manufacturing	Capable of 200% demand increase with four weeks' notice.
Finance	Staff trained on automated quote system.
Quality	Respond to failure analysis request within 15 days.
Procurement management	Able to split order into multiple delivery locations.
Production planning	24-hour response to requests for drawings, specifications, instructions.

Common requirements—customer of software company / TABLE 2

Customer function	Statement in voice of customer interview
IT	Project staff members knowledgeable about other customer problems and how they are using the tools.
Finance	Staff shares ideas for using the software solution that other people are using.
Quality	On-site staff knows where the right expertise is within the company and the experiences of other customers.
Customer service	On-site staff is knowledgeable about how software is being used at other companies and their problems and solutions.

Gather evidence

Customers can easily give you their requirements: "Be more responsive," "bring more expertise" or "provide more value." To make general statements actionable, however, requires evidence, an indicator the customer uses to know a requirement is being met.

Evidence is best gathered in one-on-one interviews and can include subtle definitions, which often must be obtained indirectly during the course of a conversation. Some typical questions used to gather evidence include:

- What do you want to see being done?
- What have you seen done well by us or others?
- What have you seen not done well by us or others?

From these questions, you can define or deduce what they are looking for.

Table 3 shows the evidence gathered in a VOC analysis conducted by a structural steel manufacturer. Evidence was needed to define the requirement "provide confidence you can execute." If you asked five steel company employees, prior to the VOC, what the customer meant, each would have offered a different answer. Relying on individual perceptions could have little or no impact. But the evidence focused on common customer responses that centered on "running kickoff meetings" and "managing outstanding action items."

Prioritize using the Kano model

After gathering the requirements and evidence, the next step is to prioritize. We recommend using the Kano model, a conceptual model developed by Noriako Kano, an ASQ fellow.[2]

According to Kano, customers think about requirements in different ways, illustrated in Figure 1 (p. 28). The x-axis is the extent to which requirements are met, a continuum from "not met" to "fully met." The y-axis is the customer's level of satisfaction, a continuum from satisfied to dissatisfied. Three different types of requirements are plotted on the graph. Using an example of a business traveler's stay at a hotel, they are defined and illustrated as:

1. **Basic:** These are requirements the customers expect to be fully met every time. At a hotel, customers expect a comfortable bed, towels and running water. When these are fully met, customers are neutral. Any shortfall leads to dissatisfaction.

Evidence—customer of structural steel manufacturing company / TABLE 3

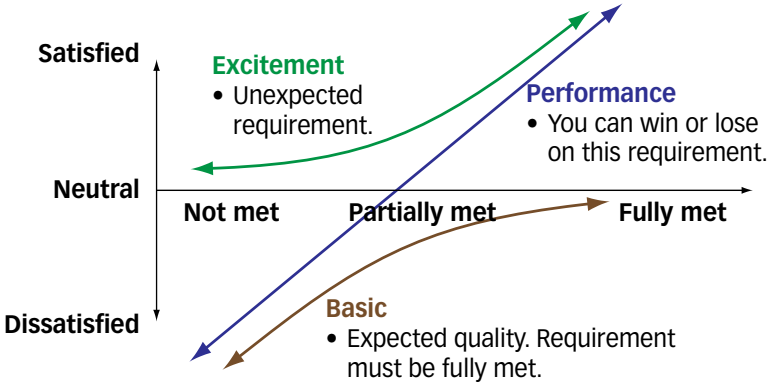
Sample requirement	Evidence it has been met
Provide confidence you can execute	Kick-off meetings are well run: • There are defined team roles, work schedule, deliverables definition and status reporting. • Specific questions are asked about quality expectations and "hold points." • Team appears eager to know the details and ask good questions. There is a constructive back-and-forth on the details throughout. Well-managed due dates and closure of action items.

Multimedia company—requirements and gaps by Kano category / TABLE 4

Area	Basic	Performance	Excitement
Sales experience	Awareness of services across business units.	Customer self service on equipment availability.	Creative, value-added service bundles.
	Technical knowledge of all services.	Single point of contact.	Customers engaged in developing services.
	Complete marketing collateral material.		
Service experience	Accurate invoicing.	Single invoice per project.	
	Internal coordination between services.	Web-enabled invoicing and project status.	
	Accessible, helpful and accountable service staff.	Proactive notification of delays.	
Facilities and operations experience	Consistent quality and quality control (QC) process.	Screening rooms with upgraded sound.	Automated QC methods.
	Clean facilities with proper equipment.	Online element tracking.	Higher yield dye transfer process.
	On-time delivery.	Access to high definition (HD) dailies.	Coordination / teaming of digital and film staff.
Overall experience	Technology updates communicated.	Ownership culture throughout business.	Participation in developing techniques.

Totally meeting requirement
Somewhat meeting requirement
Not at all meeting requirement

Kano model / FIGURE 1



2. **Performance:** These are requirements on which your company can win or lose. At a hotel, quality of food and speed of check-in may enhance or detract from the customer's view of a stay.
3. **Excitement:** These are requirements customers do not expect every time, but every time they experience them, they like them. At a hotel, it might be local specialties on the menu or staff members who remember them from a previous stay. Meeting any of these requirements leads to high levels of satisfaction.

In a VOC interview, first define the requirements, then show the Kano model and have the customer categorize the requirements as basic, performance or excitement. Using the Kano model may be novel to them and easier to do than forced ranking.

Table 4 shows a summary of requirements and gaps from a VOC project completed after VOC interviews at a multimedia company. The company organized the requirements using the Kano model and color coded them based on an internal performance assessment. This layout helped the company develop a roadmap for its improvements.

The Kano model can also help you determine where to copy or adopt competitor practices and where to expend extra effort and invest in innovations. The Kano model provides guidance here:

- Basic requirements must be fully met every time the customer is dissatisfied. Fully meeting the requirement only makes the customer neutral on the satisfaction scale. The best solution is low cost and reliable goods and services. This is a good place to leverage best practices and proven solutions.
- Performance and excitement requirements are areas ripe for innovation because they can enhance satisfaction. Most performance and excitement requirements call for incremental—not significant—investments.

Also, consider this point when using the Kano model: Performance and excitement requirements have no impact if basic requirements have not been fully met. As the customer of a software company said, "You have to eliminate system downtime first. Otherwise it won't matter what else you do."

Also recognize that, over time, requirements can change categories in the Kano model. When first introduced, many services are usually categorized as excitement. Eventually, they become widely adopted and migrate down to the basic category.

Think about the first time you stayed at a hotel with a high-speed internet connection in your room. It was convenient and fast. Today, these connections in hotel rooms have become as expected as a shower or a TV.

Define specifications

After gathering and prioritizing requirements, it is time to respond by modifying products and services. In a

Structural steel manufacturing translation example / TABLE 5

1. Requirement	2. Evidence	3. Kano category	4. Impacting process	5. Specification	6. Owner
Know the account.	New staff is educated on specifications and the history of designs with us.	Basic.	Customer planning.	Frequent informal interactions with customer to review designs.	Engineering manager.
Meets cost obligations.	Meets contractual cost requirements. Show cost decrease year over year.	Basic.	Annual planning.	Performance reported at the end of each project.	Account manager.
Reduce your cost structure.	Produce in low-cost locations. Minimizes impact of taxes and duties.	Performance.	Sourcing.	Periodic reports and reviews on cost-reduction activities.	Account manager.
Provide "cost-out" ideas. "We want to see more innovation out of you."	Recommend design changes to reduce cost. Give innovative ideas on how to reduce cost and cycle time.	Excitement.	Quarterly meetings.	Agenda that covers all the items in evidence. Assignments to compile innovations.	Product manager.

VOC analysis, product design requirements are typically translated into process specifications with a tool such as quality function deployment (QFD).[3]

The following is a modification of the QFD approach we have found to be successful in business-to-business VOC work. Four steps can be used to align the details in tabular form.

1. Consolidate the requirements and evidence, and the Kano category in a table—one row for each requirement.
2. Identify the process that delivers the evidence for each requirement.
3. Define a specification that delivers the evidence for the process.
4. Identify the owner accountable for the process.

Table 5 (p. 29) shows an example of these steps at

FINDING GEMS

Often, we hear companies say, "We already know what customers want, so why perform a voice of the customer (VOC) analysis?"

While it's true that many of requirements are expected, VOC interviews can yield requirements no one anticipated. We call these "gems."

Uncovering customer gems requires you to release some control of the interview. Most customer satisfaction interviews have a defined set of questions. If you ask a specific question, you will likely get an answer to just that question. The risk is not getting all the requirements because you don't ask the right questions.

There are other reliable techniques, however, for getting all the requirements. You should:

1. Ask the customer to comment on general topics. You could ask a specific question, such as "How fast should we respond to a line down issue?" But, it's better to generalize the question. "Where do we need to be responsive?" or "What should we be doing?" This method requires you to prepare question topics for each interview.
2. Ask about other suppliers or service providers. Get the customer to think beyond his or her relationship with you by describing what other companies do. For example, "You work with other service companies: your bank, payroll service and attorneys. How are they responsive?"
3. Ask about critical incidents, which often elicit emotional, yet informative responses. For example, "Talk about a really good (or bad) experience with us (or our competitor). What happened? What did we (they) do?"

Table 1 shows gems gathered from different VOC efforts, each with different objectives. *—M.H. and B.C.*

Examples of gems / TABLE 1

Company	Voice of customer objective	Basic requirements	Gem discoveries (performance/ excitement)
Audit and tax consultancy	Differentiate services.	Tax returns presented on time.	Speaks using our vocabulary. Provides business advice not related to taxes.
Steel manufacturer	Recover from quality failure.	No defects in the field.	Recommends costs reductions in our designs.
Semiconductor manufacturer	Be easier to do business with.	95% fill rate to request date.	Starts a vendor managed inventory program.
Postproduction company	Create a single face to customers.	Coordination between services.	Engages us in developing new techniques.

the structural steel company. The completion of this table led to an action plan to deliver the evidence.

VOC execution

In developing and executing a VOC analysis, here are a few more things to consider:

- Remember that most customers have realistic expectations. Management is often concerned customers will ask for the moon and the stars if given the opportunity. This has not been the case in our VOC projects. Customers have been pragmatic and realistic. And, remember, requirements do not require a full response if they do not make business sense.
- Treat the VOC interview like a data-collection exercise. You do not handle objections, talk about improvement ideas or commit to anything. For this reason, account or salespeople are not usually in the interviews. Show up with operations or quality staff to focus everyone on getting the data.
- Plan to execute the VOC analysis quickly. Conducting the interviews and compiling the report can take from 10 to 20 days, depending on how many people will be interviewed and how many locations there are. Compiling the requirements and translating them into a report can usually be accomplished in two to three days.
- Make the VOC analysis worth the customer's time. We have never heard a customer say a VOC analysis was a waste of time. This is because we not only listened to their complaints, but also got them to think beyond that. See the sidebar, "Finding Gems," for examples of uncovering the unexpected and improving customer relations.
- Customers like to give evidence and apply the Kano model. We have even found a VOC process has an immediate halo effect on the relationship. For example, a VOC analysis helped the structural steel company turn around a relationship with a customer and led the customer to invite the steel company to bid on new work.

Building customer relations

Maintaining and building your current business customer base requires consistently and reliably meeting all their requirements, not only for the product or service, but also for other interactions. A proper VOC process can provide specific direction on how to improve and have an immediate impact on customer relations. For example:

- The structural steel company turned around the relationship with a key customer and was asked to bid on new work.
- The multimedia company delayed several large systems projects to focus on the new direction provided from the VOC analysis.
- The software company did not have any significant project write-offs for the months following the VOC analysis.
- The audit company attributed the VOC effort as helping secure several multimillion-dollar wins.

As we have shown in these real-life examples, a VOC analysis can be a powerful and useful approach to improving business-to-business relationships in any industry or business environment. It is especially appropriate in complex relationships and broad, cross-functional touch points and when there are multiple customers for the same products and services.

VOC is best applied on projects to enhance revenue or reduce customer failures. In this business environment, VOC can add value by focusing improvement efforts and changing the interaction dynamics with the customer. QP

REFERENCES AND NOTE

1. ASQ, "Basic Concepts," www.asq.org/glossary/v.html.
2. Peter S. Pande, Robert P. Neuman and Roland R. Cavanagh, *The Six Sigma Way: How GE, Motorola and Other Top Companies are Honing Their Performance,* McGraw-Hill, 2000, pp. 193-194.
3. QFD is a widely publicized tool, covered in a number of ASQ articles and books. One of the most recent articles published in QP was authored by Jui-Chin Jiang, Ming-Li Shiu Shiu and Mao-Hsiung Tu, "QFD's Evolution in Japan and the West," July 2007, pp. 30-37.

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